

**MODERN
EDUCATION
ITS AIMS AND METHODS**

BY THE SAME AUTHOR
**SEVEN TO ELEVEN: SOME PROBLEMS
OF THE JUNIOR SCHOOL**

MODERN EDUCATION

ITS AIMS AND METHODS

By T. RAYMONT, M.A.

*Formerly Warden of Goldsmiths' College,
University of London; Sometime Professor of
Education in the University College of South
Wales, and Educational Adviser to the National
Froebel Union*

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LONGMANS

The time has now come to issue yet another reprint, and the opportunity has been taken to make some more small alterations, especially in the book references, so that the book may reflect the most recent developments in educational thought and practice. In its present form the book continues to live up to its title, *Modern Education*, as it has done throughout its long and honourable life.

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CHAPTER I

HUMAN DEVELOPMENT

As education is the subject of this book, and as the reader is invited to dig below the surface in a search for fundamental principles, it might seem natural to begin by asking what is meant by education. For most readers, however, that method of approach is probably not the best. The meaning of education,—like the meaning of religion, politics, science, literature, and other great spheres of human activity—seems clear enough, until one is asked for a definition, and then one's troubles begin. Let us therefore defer for the present the difficult though alluring quest for a definition of education, and let us begin by taking stock of the being whom it is proposed to educate—the human being. We think of a human being, as we think of all sentient creatures, as passing through a series of changes, or stages of development, from birth to maturity, and on to decay and death. Now the rate and the character of those changes can be influenced or modified, both in the lower animals and in man, but, through causes that are largely connected with his gift of language, more effectively in man. And however else we may presently define education, we know at any rate that its purpose is to bring influences to bear which modify development, making it different from what it would have been without education.

The meaning of development The word "development" again slips easily from tongue or pen, but it will be well, before we proceed further, to ask ourselves what we mean by it. First, is there any difference between development and evolution? Both words mark the fact that a living being is not simply a being, but also a becoming, subject

to continuous change. But as it is wasteful to use two good words to mean exactly the same thing, we ought to maintain a distinction between evolution, which is of the race, and development, which is of the individual.¹ Next, is there any difference between development and growth, between developing and merely growing? Strictly speaking, growth means simply increase in size, and, if we wanted to use the word in this strict sense we could apply it only to a lifeless object, such as a snowball, which increases in size, but undergoes no subtle change. In living beings, growth is accompanied by change, change of structure and of function, and it is this continuous change which is just what development means. If a baby's body were magnified to the size of a man's body, without any structural and functional changes, the result would be a big-headed, puny-legged, helpless, hideous monstrosity. The differences in the proportions of the body of a baby and of an adult answer to those structural and functional changes which constitute the fact of development, and which have accompanied the slow growth of years.² Another good example is the human brain, which does not increase much in size after the seventh year of life, but which does not stop developing at that age. Up to a point, then, growth and development proceed together, and it is very difficult to maintain a rigid distinction between them. Even the most careful writers use them interchangeably, but with slight differences of meaning according to the context. Otherwise the useful word "growth" would almost disappear from the vocabulary of the biological sciences.

Factors in development Thus when we speak of development, we are not necessarily referring to increase in size, but we do explicitly refer to "the succession of steps by which any living being has acquired the morphological and

¹ See J. A. Thomson, *Modern Science*, p. 199, for a useful explanation of this point.

² For instructive diagrams illustrating the development of bodily proportions see Buhler's *Mental Development of the Child*, pp. 37-8.

dynamic characters which distinguish it.”¹ Now let us fix upon two important stages in human development, that of the newborn babe and that of the mature adult, and let us consider, of course in a very general way, what factors must have entered into the process of development that has gone on between what we brought with us into this world, and what greeted us when we got there; between what we owe to heredity and what we owe to environment; between what comes to us by “nature” and what comes to us by “nurture.” By “nature” is here meant all that has been passed on to us by our parents; and by “nurture” is meant all that makes the difference between a well-fed child and a starveling, between a child provided with the toys and pictures to be found in a nursery or a nursery school, and a child who spends his time in the streets and gutters; between a child brought up in a big city and one brought up in a secluded farmhouse. Out of this distinction between nature and nurture there arise a multitude of questions which we cannot discuss here. Which of them, for example, is the more important for the individual? A high authority declares, as the result of statistical inquiry, that “it is five to ten times as profitable for a child to be born of parents of sound physique and of brisk orderly mentality as for a child to be born and nurtured in a good physical environment.”² However that may be, the fact remains that as good an environment as possible ought to be provided for whatever hereditary endowment, favourable or otherwise, any individual possesses. A school, for example, is a special kind of environment set up for that very purpose.

Stages of development The object of the present chapter is to give a general view of human development. Obviously we cannot here go into considerable detail as regards either the physical or the mental side of development.

¹ A. Gesell, *Mental Growth of the Pre-School Child*, p. 24.

² Karl Pearson, quoted by J. A. Thomson in *What is Man?*, p. 141.

For such detail recourse must be had to books on physiology and psychology. Meantime it will serve our purpose well to consider the stages through which every human being passes who lives, let us say, to the proverbial threescore years and ten, or beyond. It may be objected that no such general account is possible, since nature and nurture both deal so unequally with individual people. We can evade this difficulty, however, by agreeing, so far as "nature" is concerned, to keep chiefly in view a person of average intelligence and pretty sound physique; and, so far as "nurture" is concerned, to keep in view a person who is born neither in a palace nor in a hovel, but amid moderately favourable surroundings. Another difficulty is that strictly speaking there can be no very well defined stages in human life. Development is a continuous process; there are no leaps or gaps, although a curve representing a single aspect of growth and development might show steepes and plateaus. The continuity of general development is shown by the fact that many different divisions of human life have been proposed, varying according to the point of view from which they are made. Still, it is not for nothing that people commonly distinguish between (1) infancy, (2) childhood, (3) adolescence, (4) maturity, (5) middle age, (6) senescence, and (7) old age; and it is not for nothing that Shakespeare makes the wise though cynical Jaques describe "seven ages" of man. Let us take a general view of each of these seven ages, premising that any precise reckoning in years had better be avoided, because it would run counter to the facts of individuality.

Infancy By the period of infancy is here meant the first four or five years of a normal child's life. The immense importance of this earliest period of life has always been known to the serious student of child nature, but only recently has it become generally recognized. In the past the ugly, and sometimes appalling, facts of infant mortality have been more or less accepted as inevitable. But it has not even been known

that, of the children who managed to survive and to grow up, and who were not the victims of downright neglect, a high proportion were the victims of downright ignorance. A mother's natural affection, or a nurse's fondness, was implicitly held to compensate for ignorance of a child's true needs, physical as well as mental. All this is now changing in the most highly civilized communities.

The new-born child enters the world with a wail which a pessimistic philosopher has called a cry of wrath at the catastrophe of birth. He is a limp little object but he has in him the promise and potency of bodily control. "In four months he holds his head erect; in nine he sits erect; in eighteen he walks with a skill which is distinctively human. Hopping, skipping, jumping, standing on one leg, dancing, perhaps even pirouetting, may all come before the school age,"¹ and his growing manual dexterity, which later on will form the basis of writing and drawing, meantime forms the basis of much of his play. Similarly, his primitive babbling and cooing, along with his imitative impulse, result in his earliest attempts to talk. And alongside these changes that meet the observer's eye or ear, there proceeds, or should proceed, an inner and a more subtle change in the direction of self-control. The pre-school child begins, or should begin, to learn that in this world we cannot do as we like without sometimes suffering dire consequences. The psychologists (with more or less academic differences among themselves) credit the child with an imposing array of instincts, the unimpeded operation of which would never do. The child has to learn betimes that his freedom is limited by the right of others to an equal freedom. Happy is the child who learns these things under wise and understanding guidance.

The nineteenth century has been called the age of the child. Eighteenth-century folk seem commonly to have regarded childhood as one of Nature's blunders—a time of life to be got

¹ Gesell, *op. cit.*, p. 210. Dr. Gesell is an American, and in America the school age is six.

through as well as might be. The sentimental and erratic Rousseau led the way to a juster estimate. "Father" Pestalozzi, the real founder of what is best in modern primary education, combined insight with infinite sympathy. Froebel demonstrated that play, so far from being a waste of time, is the true use of time in childhood. And the doctrine of evolution, which completely altered the whole intellectual outlook in the nineteenth century, helped to alter the outlook upon childhood. The foundations of child-study laid by the pioneers have been built upon by a host of subsequent investigators, chiefly psychological and medical. More and more widely it is being understood that the scientific study of the child's needs must supplement the promptings of natural affection and the attraction of babyhood's aesthetic charm.

Childhood The next period, which for shortness' sake we have called childhood, but which would more properly be called later childhood, takes us on to the approach or arrival of adolescence, i.e. to about the twelfth year. In most countries the period of what we used to call elementary education, carried on in the common or folk school, has extended to the years between twelve and fourteen. But it is now generally recognized that the age of eleven is much more definitely epochal than the age of fourteen. To this point we shall recur in our study of educational institutions. During this period of childhood, the rapid physical growth of the preceding period is continued, about two inches being added annually to the boy's or girl's stature. The child's physical and social environment provides endless opportunity for the use of curiosity, which is a dominating feature of this period, and which it is the first business of wise educational arrangements to encourage and utilize. Curricula and teaching methods which starve curiosity, and snub the young inquirer, stand self-condemned. Excessive calls on the child's memory are sometimes defended on the ground that memory is at its best at the age of eleven or

twelve. This is probably not true in the sense that children can learn more quickly than adolescents, but it may be true in the sense that what is learnt in childhood has more chance of being retained to the end of one's days than what is learnt later. All the more important is it that the child's gift of retention should not be spent upon rubbish.¹ On the moral side, the normal child will, under wise management, gain progressively in self-control. There are certain instinctive tendencies among those enumerated by the psychologists, which easily get the upper hand at this age, unless the child is well trained. Such are the combative and the acquisitive tendencies—both of them good and useful, like all other tendencies, so long as their manifestations do not take on anti-social forms. The subjugation of such tendencies as these is the negative aspect of a process which has now become all-important for the child's development, the growth of self-respect, of a due self-esteem, of what the psychologist calls the self-regarding sentiment.² In proportion as this sentiment becomes strong, the character will become strong, and the need of minute and detailed supervision of the child's actions will be diminished. The recognition of this truth accounts for the new spirit that pervades the best homes and the best schools in this generation. The old authoritarian control which ran into petty and trifling detail has been largely replaced by a freedom implying greater trust in the best things in human nature.

Adolescence The next period, lying between later childhood and early manhood or womanhood, includes the prominent and far-reaching changes, both physical and mental, that characterize the adolescent stage. We have mentioned the age of about twelve as the beginning of the period. Where it ends it is less easy to say, especially in view of the well-known

¹ My own retention of a host of hymns, making religious as well as literary nonsense, occurs to me as a painful case in point.

² Cf. McDougall's remarks in *Character and Conduct*, pp. 65-9,

fact that the normal girl has become a woman at an age when the normal boy has less certainly become a man. We may be content to say that we are dealing with the period between childhood and maturity. At first, between the twelfth and the fourteenth years, girls grow on the average more rapidly than boys, and are actually taller and heavier; later on the position becomes reversed. In both sexes, but especially in the male, the muscles harden, and the body becomes capable of the strenuous exertions incident to the highly organized games that prevail, notably in the schools and colleges of the English-speaking countries.

Though it is a mistake to suppose that the life of sex does not begin until the oncoming of adolescence yet it is obviously true that the relations between the sexes acquire a vastly enhanced significance during this period. What goes on in the secret places of the soul during adult life is a good deal determined by the circumstances of environment and training during the period of adolescence. Not much difference of opinion now exists about the unwisdom of the old conspiracy of silence as to sexual questions, though there is still much difference of opinion about what shall be taught, and who shall teach it. Also, the advocates of co-education have not yet succeeded in convincing everyone of its desirability during the adolescent period.¹

The passage from childhood to maturity is sometimes² one of storm and stress. Young persons between fourteen and eighteen years of age, and still older, are apt to take themselves very seriously, and to suppose that they are making discoveries about human life which no one has made before. Unquestion-

¹ See, however, a striking vindication of co-education at this period by B. A. Howard, *The Mixed School*, pp. 65 *et seq.*

² I say deliberately "sometimes." Certain writers on adolescence manage to convey the impression that the adolescent is *as a rule* afflicted with a sex obsession, and I believe they are wrong. My belief, which, of course, does not amount to proof, is based upon inquiries made among many friends of both sexes. As one of the women declares—adolescence is not a disease.

ably the wise parent or teacher will take them with equal seriousness, and will realize that to act otherwise is to court failure, by creating distrust and dislike, especially in sensitive natures. Older people are apt to speak with a sort of mild complacency about the troubles, and especially perhaps about the moral and religious stirrings, of adolescence, as if they were due to a sort of mental growing-pains from which there is no escape. But it is pretty certain that many of these difficulties are created, or at any rate intensified, by the practice of teaching children what they are bound to unlearn later.

Adolescence is usually regarded as in a peculiar sense the period of day-dreams, and the experience of most people, especially people who are naturally reflective, will probably confirm this view. Here are a few reminiscences, written by an American lady, which, if not typical, are at least not uncommon:

“When I was about 15 years old I began to be very self-conscious and to be very particular about my personal appearance. . . I also grew very sensitive and thought I had a temperament of finer grain than that of other people. I wanted to be alone, where I could imagine how some ideal person would pity me for the lack of sympathy from other people, and I could not understand why my parents insisted on my being so much in the company of others. I very frequently had ‘crushes’ on older women, my mother included. . .

“I was deeply interested in religion, loved to attend revival services, and was indignant when my parents refused to allow me to take certain pledges.

“My moods were constantly changing from the greatest hilarity to the deepest gloom. I was ashamed of myself for this when I saw how even-tempered older people were as a rule, but I was powerless to restrain my own impulses. . . . I began to be less ‘afraid of boys,’ joined a dancing class and

enjoyed it, in spite of the fact that I used to think 'boys were horrid' before that . . . I was influenced by a young lady, a graduate . . . who was interested in settlement work, and taught in our school for a year, and I desired to enter the same field of work. . . . I read many stories of tenement life which developed a broad sympathy, and altruistic ideals.

"I was always writing something new in the story line. Many a time I've written a story when studying seemed to be out of the question. . . . Also my imagination found vent in my music. . . . I used to dream of being a wonderful violinist, pianist, singer, reader, and master of almost all the careers I had knowledge of."

It would be perfectly easy to cite parallel descriptions of what adolescence has meant to the growing boy. There need be no harm in day-dreams. They may turn to advantage if the young person is led to live out some of the ideals which they represent ; if, for example, a girl who dreams of deeds of mercy is led to perform one, or if a boy who dreams of being a hero is led to do something even mildly heroic. Day-dreams have a weakening effect upon character only if they remain mere dreams, or if they are so far removed from actual life as to have no bearing upon it.

But it would be a great mistake to suppose that all adolescents tend to wallow in sentimentality. Many adults, especially of the type known as extroverts, i.e. men and women more remarkable for action than for reflection, are unable to recall any such broodings as those described above. But in all adolescents alike, life makes a bold spring forward, childhood is left behind and is sometimes even despised, and the future is looked into, for all the promise that it holds. It is indeed a momentous period ; and one of the saddest sights in all our social life is that of groups (or pairs) of boys and girls of adolescent age, lounging at street corners, or wandering in country lanes, with little or nothing to do except get into

mischievous.¹ The nineteenth century was the age of the child; and happily there are many signs that in the twentieth century the adolescent is to have his turn. We are beginning to understand—and all proposals for the extension of the school-leaving age should drive home the lesson with increased energy—that adolescence is the period of adventure, of sudden growth, of intense intellectual vivacity, of insatiable curiosity, of strange conversions, of illimitable horizons; it is “the Renaissance Age of the individual.”²

Maturity We come now to the period of early manhood or womanhood, terminating, let us say, at about the thirty-fifth year, when maturity, implying the full possession of one's physical and mental powers, has been reached—not often, however, with the degree of sober judgment which the riper experience of later years normally brings. It has been said, probably with much truth, that the dominant passion of this period is that of ambition, the desire to excel, the love of power. Not, of course, that ambition is by any means confined to this period of life, but ambition is very often the peculiar strength and the peculiar danger of the period. It is the age at which a young man desires to build up a good business, to attain a good position in an office, to reach distinction in a profession, or to come forward in public life. Such ambition, within proper limits, is good both for the individual and for society. It is simply a case of the strong man rejoicing in his strength. It need not be the ruthless egoism which elbows weaker folk aside, and pushes to the front. A woman's ambition, it may be added, is apt to be transferred to her husband or her children. She is often ambitious, and sometimes unscrupulously so, directly for them, and only indirectly for herself.

¹ “The Spirit of the Game” is interestingly and practically dealt with in E. J. Swift's *Psychology of Youth*, ch. vii.

² J. Dover Wilson, *Humanism in the Continuation School*, p. 34.

Another important feature of this period is that character, at any rate if some of the psychologists speak truly, becomes fixed, through the formation of more or less unalterable habits. "Already," says William James, "you see the professional mannerism settling down in the young commercial traveller, or the young doctor, or the young minister, or the young counsellor-at-law. You see the little lines of cleavage running through the character, the tricks of thought, the ways of the 'shop' in a word, from which the man can by-and-by no more escape than his coat-sleeve can suddenly fall into a new set of folds. On the whole it is best that he should not escape. It is well for the world that in most of us, by the age of thirty, the character has set like plaster, and will never soften again."¹

According to this account, the condition known as old-fogeyism, so far from being a peculiarity of old age, comes upon us to an alarming degree at thirty years of age. James's brilliance as a writer naturally causes people to accept his judgments without due caution, but it may be doubted whether he is altogether right about the early advent of old-fogeyism. To this point we shall recur in considering the next period of human life

Middle age The next period is the period of middle age, lasting, say, till the age of fifty or fifty-five. A man has now, so to speak, climbed to the top of the hill. He can, of course, look backward, but he can also look forward almost as clearly. The future is no longer hidden behind the top of the hill, or in a mist of uncertainty. He can now see to what extent his earlier ambitions are likely to be realized. He has succeeded more or less, or may have failed to "make good." Whether ambition is still a strong force will depend upon whether he is now a successful or a disappointed man; in any case it tends to weaken as a motive. In the normal case a sense of duty becomes

¹ *Principles of Psychology*, vol. I, p. 121. No young teacher should omit to read James's famous chapter on habit

a dominating force. Doing one's duty, and seeing that others—whether children or subordinates—do theirs, becomes a main concern of life. Habits of conduct, in connection both with work and with leisure, have been thoroughly formed, and indeed may have caused their possessor to sink into a dull and spiritless routine.

Here we return to the possibility of encrusted habit leading to old fogeyism, "the inevitable goal to which life sweeps us on." According to the high authority quoted above, this is not merely a possibility but a certainty, long before even middle age is reached. It is said that we do not learn much that is quite new after the age of thirty, and that we never learn anything really well after twenty. Is this so? The question is important, especially in view of the modern movement for adult education.

Obviously it is not easy to accumulate direct evidence on the subject. We may, however, gain a hint from the observation of animals which reach maturity and pass to old age much more quickly than man does. Such observation has been made of some hundreds of rats bred for the purpose. The rats were divided into four age-groups, and all were set the same problem, that of finding the way out of a maze. It was ascertained that whereas the two younger groups needed on an average thirty trials before achieving success, the two older groups needed forty-two; otherwise expressed, the former achieved the finally perfected runs in six seconds, whereas the latter needed ten seconds. If, says the distinguished writer responsible for these statements we may "carry over" conclusions from the animal to the human world, we should say that older persons can learn as well as younger ones, but that they require more time—say one-third, or one-half, more. "These experiments," he continues, "should give those of us who have passed the first bloom of youth a good deal of hope. . . . We have now experimental evidence to show that the contention of William James concerning the non-plasticity that is supposed to go with old age . . . is completely unfounded. . . . Some of our better

musical teachers—have had [surprising] success in teaching, for example, the pipe organ to people who are forty years of age or over. . . . Modern times show, apart from experimental evidence, the tendency of the middle-aged to learn the modern dances, to drive their own cars, to play golf, and in general to add other strings to their bow.”¹

We certainly are becoming more youthful in middle-age. In mid-Victorian times men of forty assumed ponderous elderly airs, and an unmarried woman of six-and-twenty was “on the shelf.” All this is changed. The words which Trollope put into the mouth of one of his characters have come true, “every female between three and forty-three is a girl nowadays.” At least they may be if they will. And there, perhaps, is the rub—if they will. The supreme danger of middle age is that of settling down to a humdrum routine, as though all had been achieved; in other words, the danger of discontinuing one’s education. “In the summer of 1897,” writes Mr. Edmond Holmes, “I was transferred from Kent to Oxford. I had reached the critical age of 47. My body was beginning to grow old. What of my soul? Was it to grow old with the body? Or was it, as the only alternative to this, to *grow young*? I stood at the parting of the ways. But I did not stand there long. I chose the renewal rather than the mere continuance of life. Or, rather, the choice was made for me by influences which were too strong for me. The change from a small country town to Oxford, the stimulus of a great friendship, and my growing interest in psychism combined to give an impetus to the current of my inner life, which was almost equivalent to re-birth. The days of spiritual stagnation were over: and the river, wider and deeper than in the period of its foam and fury, but not less swift and strong, renewed its journey to the sea.”²

Great opportunities await the middle-aged person who

¹ J. B. Watson, in *Suggestions of Modern Science concerning Education*, pp. 91–5. Direct and favourable evidence is collected in *Adult Learning*, by E. L. Thorndike and others.

² *In Quest of an Ideal*, p. 104.

"grows young," not only of building up an inner self which is the fine flower of human development, but also of serving those who are still young in body as well as in mind.¹ George Eliot, in the course of one of those penetrating pieces of analysis which are sometimes more helpful than the psychology of the text-books, says—"The middle-aged, who have lived through their strongest emotions, but are yet in a time when memory is still half-passionate and not merely contemplative, should surely be a sort of natural priesthood, whom life has disciplined and consecrated to be the refuge and rescue of early stumblers and victims of self-despair. Most of us, at some moment in our young lives, would have welcomed a priest of that natural order, in any sort of canonicals or uncanonicals, but had to scramble upwards into all the difficulties of nineteen without such aid."¹

To have missed such aid when it was most needed has been the tragedy of a world thousands of young lives. Here is the opportunity of the middle-aged. But middle age, in order to grasp that opportunity, must not allow itself to stagnate. It must continue to grow. It must continue its education. To the middle-aged man a wide range of possibilities lies open. At one extreme he may achieve the high destiny of that natural priesthood of which George Eliot speaks, whilst at the other he may become a corrupter of youth.

Senescence The penultimate period of human life, that which follows middle age, may be taken to last till about the sixty-fifth year, at any rate in the case of men. As it takes us to the on-coming of old age, it has been called the period of senescence. A healthy person of sixty may very well feel sensitive at the use of this term, and may prefer to call the period that of late middle age. At any rate it extends to the time when a man expects, and is expected, to lay down the heavier burdens of responsibility and of hard work. Most people,

¹ *The Mill on the Floss*, bk. vi, ch. ix.

whether engaged in business, the professions or in manual work, begin during the period of senescence to think of retirement. There is no need to deal at length with this period, after what was said above about middle age, because so much depends upon how the latter has been spent. If a person of forty or forty-five has allowed himself to get into an unchanging groove, if he has allowed his faculties to rust, if he has ceased to learn and to expand mentally, it is not very likely that he will desire to effect a revolution at the age of fifty or more. But if he possesses the desire, it is by no means impossible that the desire should be fulfilled. As on the moral side it is never too late to mend, so on the intellectual side it is never too late to learn. Indeed, intellectual force normally lasts on into old age, as we shall see presently.

But the peculiar contribution of senescence to the common stock of human welfare depends not so much upon learning as upon wisdom. Wisdom, says the dictionary, is that power or faculty of seeing into the heart of things, and of forming the fittest and best judgment in any matter presented for consideration; it is "a combination of discernment, judgment, sagacity, or similar powers, involving a certain amount of knowledge, especially knowledge of men and things gained by experience." The dictionary is certainly right in implying that wisdom may exist without much learning, and that much learning may exist without wisdom.¹ Again, the quality of wisdom is not confined to the later periods of life. All one means is that if a man is wise at all he is wisest then. Senescence is usually the period of ripe statesmanship, and, indeed, the period when, in all walks of life that involve high responsibilities, a man is regarded with greater trust and confidence than would have been accorded him at an earlier age. The senescent retires from his position of responsibility, not because his mental vigour has

¹ The contrasted characters of Mr. Casaubon and Caleb Garth in George Eliot's *Middlemarch* is a case in point, and by no means an uncommon case

abated, but because his diminished physical vitality causes him to become more easily fatigued than before. We are here, of course, speaking in general terms and of the normal case. The "grand old man" does occasionally happen in politics, in literature, in commerce, and in all occupations in which long experience is advantageously combined with intellectual force.

Old age We come now to the period of old age. But in what way, it may be asked, is a book on education concerned with old age? Part of the answer lies in the obvious fact that a well-cultivated mind is the greatest solace of old age, and that a man who has continued his education, in the sense of living for other things besides material prosperity and comfort, will not stop even at threescore years and ten. In considering the position of old age in the general fact of human development, it is interesting to compare the life curves, to use a mathematical expression, of the several vital functions. "From birth the curve of *nutrition and metabolism* falls relatively as the organism attains its development, until about the twentieth year, when it reaches a plateau which is continued until old age is established, when it falls again to the end of life. The curve of *motility* ascends proportionately to that of growth until the period of maturity, reaching its height in the third decade, and falling gradually after this to the end of life. The curve of *reproduction* (as measured by fertility) remains neutral until the sharp rise at puberty, and begins to fall at thirty, declining more rapidly during the following decades than the functions of motility and nutrition. On the other hand, the curve of *cerebral and psychological function* ascends sharply, closely paralleling the curve of growth, but continues to ascend after the period of maturity is reached, even into old age, beginning to fall at about the middle of the seventh decade. It is the only vital function that shows persistent evolution after the peak of maturity has been reached."¹ It must be repeated that there

¹ A. S. Warthin, *Old Age*, pp. 30-1

are great individual variations. But this scientific account of what is to be expected normally makes nonsense of the cry, "too old at forty," or even at sixty, at any rate for intellectual work.

Though in old age the body may move slowly, it may be healthy, and though the mind may also move slowly, it may still retain, far on into the seventh decade and beyond, whatever of clarity and force it has always possessed. The dominant features of old age must, of course, depend upon what has gone before. If the previous stages have been lived through well, a dominant passion is apt to be the contemplation of the beautiful in nature, in art, and in human life; if ill, a common passion is that of avarice, the senseless grasping for the mere sake of possession, even when the need of further possessions has passed away. Still more unfortunate is it when the desires of the flesh persist, even though the physical powers have waned. The doctors tell of cases in which great restraint and self-control are needed by men of advanced years.

But old age at its best has a great contribution to make to the common stock of knowledge and wisdom, just as childhood at its best contributes to the purest forms of human happiness. As links with the past, as depositories of experience, the aged of every generation have much to give to the young—as many an old man's reminiscences will abundantly attest. The return which it behoves the young to make is a chivalrous regard and respect, and provision for economic independence.

The problem of educability Such, stated in very general terms, is the course of normal human development from infancy to old age. We have seen that this development involves two sets of factors, which we have called external and internal. We have distinguished between nature and nurture, heredity and environment. "Nature," including the facts of heredity, plainly sets limits to what environment, including educational opportunities, can do. Silk purses cannot

be made out of sows' ears. According to their natural intelligence a large number of children of the same age may be grouped as (1) supernormal, (2) normal, (3) dull and backward, (4) educationally subnormal, and (5) downright imbecile. The first of these groups owes least to educational institutions. A hundred instances might be quoted to prove that genius will out, school or no school.¹ At the other extreme, the imbecile is uneducable. The educationally subnormal, whose education may cost many times more than that of the normal child, can be brought to the point of earning, or partly earning, a livelihood in an occupation calling for patient industry rather than for intelligence. The dull and backward present a problem which is beginning to receive the attention which it deserves. The dunce is an inconvenient person, but he is an interesting study, and he may prove a fine opportunity for a teacher who has faith in the dictum of a famous headmaster, that every boy can do something, and do it well.

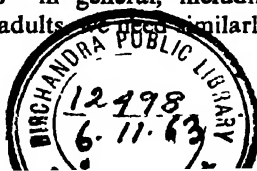
But even if we consider only persons of normal intelligence, doubts have arisen in some quarters as to the educability of most of them, and therefore of the worth-whileness of all our elaborate educational machinery. The famous American Army Tests, designed for the purpose of selecting and grading men according to the degree of their intelligence, and applied to no fewer than 1,700,000 men, seemed to show that 45 per cent of them were of mental age from 10 to 12 years, 25 per cent of mental age 13-14 years, 16·5 per cent of mental age 15 years, only the remaining 13·5 per cent showing that they had more intelligence than a normal youth of fifteen. The inquiry thus set going has been continued, and workers with mental tests have been led to the astonishing conclusion that, so far at least as their carefully devised tests can be relied upon, intelligence, which improves gradually until the 11th year, makes no further

¹ The reader might amuse himself by making a list of living persons of eminence who owe nothing to a university, and little or nothing to any school. But he should be extremely cautious in drawing inferences from these facts. And there are degrees of supernormality.

advance after the 16th year, or, possibly, after the 14th or 15th year. *Some startling deductions have been suggested. What, it has been asked, is the use of spending so much time, and money and thought, and labour upon the education of "the masses," whose intelligence cannot be improved? Would it not be more profitable to concentrate upon the supernormal few, and to cease worrying so much about the normal many? And why all this stir about adult education, seeing that Carlyle was not so far wrong as we had supposed when he said that most of his fellow-countrymen were fools? To a good democrat these are disturbing questions.*

As to the educability of adults, we have already seen that the alleged disappearance of plasticity, of learning capacity, at five-and-twenty or thereabouts, is mere opinion, not likely to stand the test of scientific scrutiny. Again, the provisional conclusions that have been reached from the application of mental tests are only to the effect that intelligence, or whatever it is that the tests measure, does not increase after, let us say, the period of adolescence. It is not suggested that intelligence actually diminishes, at any rate until the period of senile decay sets in. If middle-aged men seem to have lost in mental alertness and adjustability (as British officers, relying upon experience in South Africa fifteen years earlier, are said to have done at the beginning of the first Great War) it is not because their intelligence has diminished, but because their education stopped too soon. Finally, even if it should be proved that an adult is in some sense less educable than a juvenile, it would still remain desirable that he should be offered the means of developing such intellectual and aesthetic interests as he may have begun to form. In short, the experimental psychologists will do no harm by conducting investigations into the educability of the adult. Meantime, the apostles of adult education had better get on with their job.

As to "the masses" in general, including children and adolescents as well as adults, we need similarly to entertain no



fear that the huge sums annually expended upon education are in great part wasted, at least if the right kind of education is provided. It may be entirely true that intelligence, or rather that which is tested by "intelligence tests," ceases to improve at a relatively early age; but that is no argument whatever against making the utmost of such intelligence as average people do happen to possess. The question whether such education "pays" in a strictly economic sense is one that might be argued, but in any case the economic aspect of the matter is not the only aspect, and is perhaps not the most important. To this matter we shall revert in the next chapter.

REFERENCES

Among books covering the age ranges from infancy to adolescence: M. M. Reynolds, *From Seed to Saplings*; C. Bühler, *From Birth to Maturity*; and Ruth Strang, *Introduction to Child Study*

On infancy and early childhood, the works of Piaget, of Susan Isaacs, of A. Gesell and of K. Bridges represent careful and recent scientific inquiries. See also Bernfeld's *Psychology of the Infant*, W. Stern's *Psychology of Early Childhood*, and E. J. Swift's *Psychology of Childhood*.

The emergence of the Junior School into a definite place in our school organization is causing more definite attention to the period 7-11. S. Isaacs's *The Children we Teach* deals mainly with that period. Kenrick's *The Child from Five to Ten* shows keen and sympathetic observation. See also the relevant chapters in E. B. Warr's *New Era in the Junior School*, and N. Catty's *Learning and Teaching in the Junior School*.

As to the period of adolescence, an impulse was given to its study in America by the appearance in 1904 of Stanley Hall's extensive treatise. Among books that take account of recent investigation are L. Hollingworth's *Psychology of the Adolescent*, Luella Cole's *Psychology of Adolescence*, and F. D. Brooks's *Psychology of Adolescence*, which has comprehensive references to the literature of the subject. See also O. A. Wheeler, *Youth*.

As regards the periods of maturity, middle age, senescence and old age, the progress of adult education, the social changes that are taking place, and the "ageing" of the population, will probably give an impetus to the systematic investigations which are still to seek.

CAN EDUCATION BE DEFINED?

The wider and the narrower meaning THE upshot of the preceding chapter is that a person's mind may go on growing and developing all through life, or at any rate until senile decay sets in; and that education, whatever else may be said about it, consists in modifying the environment, or creating a special environment, such as a primary or secondary school, a university, a technical college or an adult class, for the purpose of influencing personal development. Of course, the word education may be used in a wider sense. One may say, and say truly, that it is really life that educates; that one is educated by one's vocation, by home life, by friendships, by marriage, by parenthood, by recreations, by travel, and so forth. Yet we may agree to restrict the term to those agencies which are established for the express object of furthering people's education. For our immediate purpose then, we may say briefly that being educated means in the first place going to school. That is the sense in which the word is used in ordinary speech and in legal enactments. The context will always show whether the word is being used in a wider sense, and it will sometimes be so used in this book.

Some naïve definitions Now any intelligent child can tell us in his own way why he goes to school. If he were asked the question, most likely his answer would be that he goes to school in order to learn. If pressed a little further, he would add that he goes there to learn to read, and write, and draw, and sing, and so on. And for him that answer would be correct and sufficient. Any further embellishment might easily mark him down as a little prig. Yet the onlooking and reflective adult spectator of the scene knows perfectly well that the

school exists for other things besides the obvious one of imparting information. For example, Squire Brown, on the day that he sent his son Tom to Rugby, reflected thus: "Shall I tell him to mind his work, and say he's sent to school to make himself a good scholar? Well, but he isn't sent to school for that—at any rate, not for that mainly. . . . If he'll only turn out a brave, helpful, truth-telling Englishman, and a gentleman and a Christian, that's all I want." Squire Brown belonged to the comfortable classes in a bygone England, and not even the comfortable classes of the present time can afford to treat learning quite so cavalierly. Yet for him his answer to the question, "What do I send Tom to school for?" was correct and sufficient. He had a practical philosophy of life, and his philosophy of life found expression in his broad generalization about the aims of a school education.

All the way through the history of civilized man, the quest of a comprehensive definition of the real aim of education has proved alluring, and not less puzzling than alluring. Many definitions are of the off-hand sort, like that of Squire Brown. "Education," says one, "is what remains after you have forgotten everything you learnt at school." "The aim of education," says another, "is to lift the mind out of blind alleys."¹ "Education," says a third, "is the transmission of life by the living to the living."² "The aim of education," says another, "is to make children fit to live, and fit to live with." Such statements as these, which might be multiplied indefinitely, are epigrams rather than definitions, and do not take us far. Flashes of insight light up a bit of the road momentarily, but still leave us groping towards our goal. And we have many learned counsellors. A large book might be filled with attempted definitions of education, and some large books have been devoted entirely to the problem of defining education.³ Many

¹ H. G. Wells, *The Undying Fire*.

² Edward Thring.

³ E.g. E. C. Moore, *What is Education?* J. Welton, *What do we mean by Education?* Stanley Leathes, *What is Education?*

of the leading names in the history of philosophic thought are also leading names in the history of educational thought—Plato, Aristotle, Locke, Kant, Herbart, Herbert Spencer, and many others.

We must not, indeed, be afraid to admit that the search for a definition of the aim of education is essentially a philosophic quest. Philosophy is an unceasing effort to discern the general truths that lie behind the particular facts, to discern also the reality that lies behind appearances. Philosophy is conversant, too, with judgments of value as distinguished from judgments of fact; and the attempt to find the true aim or aims of education is an exercise in judgments of value. It is partly for this reason that education can never be defined by the psychologist as such. When a psychologist undertakes to define education, he may produce a very good definition, but in that case he must have become something besides a psychologist.

The dangers of definition Shall we do well, then, to marshal some of the definitions of education that have been proposed, and try to find reasons for preferring one to all the others, or perhaps even advance the claims of a new one? Before taking such a step, we may profitably remind ourselves of the increasing tendency in modern thought to distrust clean-cut definitions. Even in the physical and mathematical sciences this tendency is observable, much more so in philosophy, religion, politics, psychology, and the sciences of human nature generally. A contemporary thinker implores his readers "to resist the vice of collecting 'definitions' of this, that, and the other, as if anyone but a fool imagined that he could compress a thing like art, or religion, or science into an epigram which could be lifted from its context, and, so lifted, continue to make sense." "Giving and collecting definitions," he continues, "is not philosophy, but a parlour game."¹ These are strong words, but hardly too strong to characterize the attempt

¹ R. G. Collingwood. *Speculum Mentis*, p. 111.

to compress into a sentence the pith and marrow of all that may be understood by education. What any person understands by education depends partly upon the mental system which he himself brings to bear upon the educational process as he views it. A biologist, a priest, a schoolmaster, a merchant, a shopkeeper, and an artisan, all yielding the same "intelligence quotient," and all bringing that intelligence to bear upon the problem of finding a definition of education, might find widely different definitions. But their definitions, if well considered, might be seen to be complementary rather than contradictory. Merely to collect their definitions may be a parlour game. But to consider their definitions in the light of their mentality is not frivolous, nor even unphilosophical.

Vocational aims And indeed there is always a certain philosophy, a certain general view of life, lurking behind an explicit or an implied definition of education. We have just mentioned the shopkeeper; more broadly, let us say the business man, or more broadly still, the economist. Their characteristic view of life is apt to be reflected in what they have to say about education, and for obvious reasons demands our attention. A business man, who was also a member of a local education authority, criticizing the type of boy who left school at fourteen years of age, remarked, "I ask a boy whether he can do shorthand, and he tells me that he can't, but that he can do clay-modelling." Probably without knowing it, the critic was propounding a philosophy of life, widely different from that which is advocated, for example, by a labour leader. A distinguished Conservative member of the British House of Commons declared not very long ago that a good education could be got out of the three r's together with one's vocation. To which it might be replied that though a good education might conceivably be got out of the three r's and engineering or medicine or politics, it is harder to see how a good education could be got out of the three r's together with

chimney-sweeping or street-scavenging. Much might depend upon what is implied by the three r's, and especially by the first of them—reading.

Education for leisure There was a time, not long ago, when the working life of the average man or woman was divided into two parts—work, and relaxation or play. The hours of work were so long, and the work was often so monotonous and dull, that the brief period of relaxation was apt to be one of artificial and illusory happiness, often induced by the flowing bowl, and the boon companionship of the public-house. For most men the conditions of life are changed, and for women they are rapidly changing. As the use of mechanical inventions spreads, the hours of labour become fewer, and the margin of respite from labour is correspondingly wider. One of the greatest social questions of our time is—how is that margin to be spent? The only possible answer is that to the two categories of work and play (or mere relaxation) there must be added a third category, the best name for which is leisure. The distinction was made by Aristotle nearly twenty-three centuries ago, and it needs to be revived “Work, he thought, was something done not for its own sake, but as a means to something else—affluence, or, at any rate, subsistence; recreation was rest from work, which took the form of play, and issued in the recovery of poise of body and mind, disturbed and unbalanced by work; but leisure was a noble thing, and indeed the noblest thing in life—it was employment in work desirable for its own sake—the hearing of noble music and poetry, intercourse with friends chosen for their worth, and the exercise of the speculative faculty. In this fine sense of the term, we may say that we live for leisure, that it is the end of our being, which transcends work and far transcends recreation; that it is the growing time of the human spirit.”¹

¹ Ernest Barker, *The Uses of Leisure*, pp. 6-7. The reference is to Aristotle's *Politics* (tr. Newman, III, p. 422). In a lecture on “Labour

The conception of education as primarily for leisure is forced upon us by the conditions of modern industry, which require, for example, that a factory girl should "spend the whole of her day in putting sheets of tin plate into the slot of a printing machine," that another should "spend the whole of her day in wiping the printed tin sheets with an oily rag," that another should "spend the whole of her day in putting the printed sheets into a stamping machine," and so on.¹ Endless instances of similarly monotonous work, requiring a bare minimum of intelligence, might, of course, be given. And although, under a good scheme of trade or technical instruction, something might be said on the other side, it probably remains true that for most people the actual requirements of vocation take a very small place in any reasonable view of educational aims. If this is not true, then at any rate the established school curricula of the present time—including literature, music, folk-dancing, drawing, geography, and so on—stand obviously condemned. The conception of an education for leisure is not, indeed, allowed to pass unchallenged. It has been held that a civilization which rests upon a basis of mechanical and unintelligent labour stands condemned, and ought to be mended or ended, and the hope has been expressed that the time is not far distant when people will decline to engage in such labour. It has also been contended that a mere machine-minder might also become something of a machine-expert, and so become something more than a drudge. Meantime we have to face the existing facts. Certainly the more mechanical occupations, and in a less degree the occupations which call for intelligent action, require the relief which we have

and Leisure" in *Responsibility and Culture*, Dr. L. P. Jacks criticizes Bertrand Russell for making a clean cut between labour and leisure. Dr. Barker's threefold distinction between labour, leisure, and relaxation seems to meet Dr. Jacks's difficulty. On the whole subject see a series of papers in *Education and Leisure*, notably those by Rabindranath Tagore, A. Strong and F. Raymond.

¹ See G. Sampson, *English for the English*, p. 9.

called leisure. And a general or liberal education, as distinguished from a technical training, is in great part an education for leisure.¹

Education for "complete living" Since a well-spent life consists of labour and recreation and leisure, it would seem after all more reasonable to adopt some such definition of education as that which was offered by Herbert Spencer, in one of the most widely read and most stimulating and influential books on the subject produced in the nineteenth century. He defined education as preparation for complete living. But when he came to expand this formula into a definite scheme, he fell into most of the traps which we in the twentieth century are still trying to avoid. For one thing, he over-emphasized the word "preparation." He ignored the child's right to be a child—to think as a child, to speak as a child and to understand as a child. He was in far too great a hurry to get the child to put away childish things. If he had understood Pestalozzi better, and if he had known and appreciated Froebel's work as well as did his contemporary Charles Dickens, he could never have given countenance, as in effect he did, to a scheme of education which Gradgrind himself would have approved. It is hardly to our present purpose to show how thoroughly Spencer's analysis of an adult's "complete living," and his educational deductions from that analysis, were vitiated also by the extreme position he maintained in the controversy regarding the relative claims of science and the classics which was current in his day. But this is only to say that a mere formula is a dangerous toy to play with, unless its fount and origin have been investigated. Huxley, with his shrewd wisdom and his delicate sense of

¹ The following are a few actual examples known to the writer:

<i>Work</i>	<i>Leisure</i>	<i>Recreation</i>
Domestic Service	Acting and Reciting	Walking, Bridge
Teaching	Writing, Reading	Country Walking
Medical Practice	Music, Verse-writing	Golf

humour, was a far more effective advocate of the true claims of science, and a far wiser interpreter of the idea of "complete living."¹

Education for citizenship Spencer includes the duties of citizenship among the major elements of complete living, and preparation for those duties as one of the greater aims of education. But in truth the idea of citizenship may be so understood as to include all that he means by complete living, and so the general aim of education has sometimes been defined as preparation for citizenship. An influential Welshman living in Cardiff once remarked to the writer: "My first business is to be a good Cardiffian, which means, incidentally, being a good husband, and father, and friend; my next business is to be a good Welshman, my crowning business is to be a good Briton, and what influence I possess over education shall be ordered accordingly." These words were uttered long before the League of Nations was ever heard of, and they point to a limitation of outlook which we have had serious reason to correct. Once more we find that a brief definition of education cannot be accepted without inquiry into the meanings that lie behind it. If education is to be for citizenship, it can be for nothing less than citizenship of the world. In other words, we have to revise our conception of patriotism. Patriotism is a good example of what the psychologist calls a sentiment—an organized system of emotional tendencies centred about the same object. It may be likened to family feeling. An intense affection for one's own family is quite consistent with some affection for several other families, and with at least a broad toleration of an indefinite number of others. Precisely so, an intense love of one's own country is quite consistent with some love of several others, and at least a broad toleration of most of the rest. Nothing is to be gained by trying to merge the fact of patriotism in a misty cosmopoli-

¹ See the passage quoted at the end of this chapter.

tanism. "A true Britisher," says an American writer, "feels a thrill of pride when he hears that the sun never sets on British soil. The American, however humble, is never left unmoved by the statistics of billions of exports and imports, especially when the balance is in favour of America. Neither may be in any degree the better off for the fact, but he thrills as he does at his own success."¹ Yet an ardent patriotism need not be an exclusive and selfish patriotism.

Education for individuality "My country, right or wrong," says one. "What is wrong for the individual cannot be right for the state," says another. The second of these two voices must prevail in all our direct teaching and incidental education; otherwise there can be no security against a repetition of the cataclysm of war. Whatever may be the final verdict of history upon responsibility for the outbreak of the first great war, there is no doubt that in Germany long before the second great war a perverted nationalism had taken shape in the doctrine that the individual exists for the state, and not the state for the individual. This is the worst form that an excess of patriotism can assume, and it is probably true to say that in the last resort it was mainly upon this issue that the first great war was fought. The German theory of the state was embodied in the German school programmes, which aimed at producing German citizens of certain standard types, and discouraged individuality. In a minor degree the same idea was present in our English education, especially in the case of the public schools, which aimed at the production of a type, and in which individual variations were condemned by public opinion, but in this case a personal and social rather than a national type was the object in view. Against all these tendencies to ignore individuality a vigorous protest is being made in our day, so much so that we now witness the opposite tendency to define educa-

¹ W. B. Pillsbury, quoted by Maxwell Garnett in *The Problems of Peace*, p. 335.

tion as an effort to secure for everyone the conditions under which individuality is most completely developed.¹

The question is, however, whether in avoiding the Scylla of ultra-uniformity, this definition also avoids the Charybdis of ultra-diversity. This criticism may be met formally by saying that individuality is not the same as eccentricity. Still, the question remains whether we are not incurring the risk of emphasizing individuality to the extent of neglecting or ignoring the truth that there are broad and general human ideals towards which all educational measures should tend, a broadly definable culture and character which all education should seek to secure. So it would seem better to say that education means securing for everyone the conditions under which the general attributes of ideal manhood or womanhood in a given society are developed, and at the same time securing for everyone the conditions under which individuality is given its appropriate chance.

Education for "harmonious development" The view that education should aim at the development of individuality comes into conflict with, and perhaps supplies a corrective of, another view which found favour in ancient Greece, and has also found some favour in modern communities. The aim of education, according to this view, is the harmonious and all-round culture of human powers or faculties, mental and physical. Here we have the principle of harmony, or balance, or symmetry, the principle of "nothing in excess," made the ruling conception in education. A sort of static perfection is made the object of the educational process. One of the best examples of the manner in which this ideal was carried into practice in modern times is seen again in the German school curricula referred to above, which were so carefully elaborated in the nineteenth century. But in truth we may look

This view is impressively developed by T. P. Nunn in his *Education: Its Data and First Principles*.

nearer home for a striking example. When the present writer presented himself for matriculation at the University of London, he was compelled, in accordance with the regulations which prevailed in the 1880's, to offer all the following subjects: Greek, Latin, English, French, history, geography, arithmetic, algebra, geometry, chemistry and natural philosophy, this last subject including dynamics, statics, hydrostatics and pneumatics. Such was the court paid to the notion of an all-round, harmoniously developed youth or maiden of seventeen or thereabouts. Later on he found that the course for a degree in "philosophy" included psychology, logic, ethics, metaphysics, economics, and political science. We have travelled far since then, and we have travelled in the direction of giving a fairer chance betimes to individual tastes and abilities. The weakness of the system from which we have emerged was that it ignored individuality, and was therefore prejudicial to the best kind of development. On the other hand, the "elective" system that prevails in American higher education is held by most European observers, and by many distinguished Americans, to place just that exaggerated emphasis upon individual likes and dislikes, the danger of which we have already noted. A balanced curriculum is needed, but that need is quite consistent with reasonable allowance for individuality

Self-expression as the aim The view that education means securing the means by which individuality may be developed takes on an exaggerated form when self-expression is put forward as a guiding principle of life, and, therefore, of education. To be free from the restraints which have traditionally been imposed upon the individual, not only by social convention, but also by moral law as generally accepted, to give freer rein to those instinctive impulses which certainly lie at the roots of human as of animal nature, to "live one's own life," these are the forms which the principle of

self-expression assumes, and which receive more or less encouragement in some scientific or pseudo-scientific quarters. It is, indeed, too late in the day to deny that disorders of body and mind are often the result of unduly repressed instinctive tendencies. But the resort to "free" self-expression as a remedy is anti-social, and is bound, in the long run, to defeat its own purpose. If crude self-expression is allowable for some instincts, such as the sexual and the parental, it should be allowable for others, such as the pugnacious and the acquisitive—and that way lies the destruction of all ordered social life.¹

We are here brought up against the old problem of the true nature of freedom, and the old distinction between freedom and licence. The demand for relatively unrestricted self-expression is probably more insistent at the present time in America than in England,² and it is, perhaps, no accident that the tendency to observe the motto "learn what you please," which is seen in the elective system of studies, is matched by a tendency to observe the motto "do what you please" in matters of conduct. But the unwholesome demand for individual freedom is not confined to one side of the Atlantic. And so far as the schools are concerned, it is unfair to quote Froebel and Montessori as authorities for that demand. Froebel did indeed stand for "rendering the inner outer," and for the self-activity of the learner, but he cannot be quoted in support of the view that the "self" is good enough to need "expression" without further ado. And if Montessori advocated vigorously the claims of the child to individual freedom, she guarded herself by the limitation that such freedom could be exercised only in so far as it is consistent with an equal degree of freedom for other people.³

¹ This point is well brought out in J. A. Hadfield's *Psychology and Morals*, ch. xviii.

² See J. Adams, *Evolution of Educational Theory*, pp. 146-8.

³ Cf. *The Montessori Method*, p. 87. "The liberty of the child should have as its *limit* the collective interest; as its *form*, what we universally consider good breeding."

Education and self-realization A good way of seeing the shortcomings of self-expression as an educational aim is to bring it into contrast with self-realization. The two terms are often confused, with results disastrous to clear thinking. The term "self" means different things in the two cases. There is all the difference between my "self" as I unhappily know it, and my "self" as I would have it to be. It is the real concrete self that one knows, and perhaps does battle with day by day, which many people mean when they talk about self-expression. It is an ideal self—that which one desires to be in one's moments of deepest wisdom and insight—which philosophers mean when they talk about self-realization. Self-expression emphasizes the side that is usually indicated by self-assertion, but "self-assertion is essentially individualistic, whereas self-realization is not. The wider idea is based on the organic conception of society, and considers the self not so much as realizing itself against society as realizing itself in society."¹ Self-realization does not imply absorption in the self, for the ideal self is a social self, which can be realized only in a "world of selves." Viewed in the light of self-realization, the work of education may be described as finding out the pupil's possibilities, and providing the means by which he may be enabled to realize the highest of them. On the face of it, this is not very different from saying that the work of education is to enable the pupil to make his characteristic individual contribution to the common stock. But the introduction of the notion of an ideal self does perhaps make a difference.

Conclusion thus far Does it seem as if our quest for a definition of education resembles the exploit of a certain Duke of York, who is said to have marched his men up a hill, and then marched them down again? Perhaps, to change the metaphor, we have been hunting for something which we have not found. And we have been wasting our

¹ A Jams, op. cit., p. 146.

time, unless we agree that this is a case in which the chase is more important than the spoils. If we have been unable to find any agreed definition of education, we are at any rate in a better position to know the reason why. It lies in the very nature of human thought that all useful definitions of such a concept as education are partial and one-sided. For "concepts are not something uniform all through their structure. They have none of the nature of a monolith, but on the contrary are more like a bunch of different connections united only by a common centre like a set of many household keys on the same ring. And as we use only one key at a time, so only one certain aspect of a concept functions in any judgment, not the concept as a whole."¹

If one is commanded to stand and deliver a definition of education, some general ideas on the subject will very likely occur to one, and a definition akin to that which is to be found in the dictionary may be produced. But if the concept education is being *used* in some actual process of reasoning or exposition, only the relevant part of the concept will function. It is one of the penalties of the use of language that we tend to think of education as a simple thing that *is*, rather than a complicated process that *goes on*—a process so complicated that in actual practice we think of only one aspect at a time. "In no case are we capable of thinking of education in such a way as to take into consideration and pay attention to all aspects of the concept at the same time—sometimes we think of education as growth, sometimes as a social problem, or as preparation for life, or instruction, or building up good habits, or as development, or as something that must be financed in one way or another, and so on, and so on."²

Thus if one clear thinker defines education as "securing for everyone the conditions under which individuality is most completely developed,"³ and if another defines it as "the process of training the industry of man, in its manifold varieties,

¹ B. Bogoslovsky, *The Meaning of Controversy*, pp. 119–23.

² *ibid*

³ Nunn, *op. cit.*, p. 5.

and in its organized totality, to the highest pitch of excellence it is capable of attaining,"¹ each of them may be regarded as concentrating upon a certain aspect of the process, and each may be quite justified in adopting a definition which enforces the particular point of view he is taking. But a definition which will serve all purposes is still to seek, and will be for ever to seek. We may console ourselves with the sayings of the sages, that the search for truth is better than the possession of truth, and that to travel hopefully is better than to arrive.

The term "liberal education" Our conclusion that anyone's definition of education depends upon his general view of life, and even upon the particular thesis that he happens to be maintaining at any one time, may be further illustrated by some reference to the fortunes of the term "liberal education." The traditional conception of a liberal education is well exemplified in J. H. Newman's lectures on university education.² He points out that the grammatical opposite of "liberal" is "servile," and in this sense liberal pursuits are exercises of mind, of reason, and of reflection, whilst servile work is empirical or even mechanical. But, he proceeds to say, we want something more than this to explain the difference between those studies which are liberal and those which are not liberal. This difference, he says, arises out of the purpose for which a study is undertaken. A study is part of a liberal education if it is undertaken for its own sake, but not if it is undertaken for the sake of some practical end, whatever that end may be. The liberal is thus contrasted with the useful. Even theology, unless it is "cultivated as a contemplation," rather than for its usefulness for the purposes of the pulpit, is not a liberal study. Much less, presumably, could chemistry claim rank as a liberal study, unless it is pursued for its own

¹ L. P. Jacks, *op. cit.*, p. 58

² See his *University Teaching*. Discourse V, "Knowledge its own End."

sake, and not for the sake of its industrial applications. So Newman defines liberal education as the "process of training, by which the intellect, instead of being formed or sacrificed to some particular or accidental purpose, some specific trade, or profession, or study, or science, is disciplined for its own sake." He thus makes a sharp distinction between what is liberal or cultural, and what is vocational or useful. "That alone is liberal knowledge," he insists, "which stands on its own pretensions, which is independent of sequel, expects no complement, refuses to be *informed* (as it is called) by any end or absorbed into any art, in order duly to present itself to our contemplation."

Now it may already have occurred to the reader that there is something not quite satisfactory about a distinction so sharply drawn. Is there so much difference after all, he may be inclined to ask, between studying psychology for its own sake, and studying it because one hopes it may throw light upon the work of a teacher, or a preacher, or an employer of labour? Is there so much difference between choosing to study economics or politics for its own sake, or because one intends to embark upon a business or a political career? At some places the line manifestly becomes a thin one, and as a matter of fact the distinction made by Newman is simply rejected by thinkers as distinguished in their way as Newman was in his. The view of this nineteenth-century Englishman stands, for example, in striking contrast with that of the twentieth-century American John Dewey. Dewey maintains that the defenders of the traditional idea of a liberal education are playing with words. When a man seems to be undertaking an intellectual or aesthetic pursuit for its own sake, he is really doing so, possibly with a view to teaching, or writing, or public speaking, possibly with a view to filling his hours of leisure congenially, or possibly with a view to that personal adornment, that social companionship and entertainment that give prestige, and that art of spending money, which have been made into definite callings.¹ In other

¹ See *Democracy and Education*, p. 365.

words, the democratic Dewey insists that the so-called liberal education may be meant to fit a man for what has been called the trade of being a gentleman. "The fact is," he says, "that the opposition of a high worth of personality to social efficiency is a product of a feudally organized society, with its rigid division of inferior and superior. . . . The separation of the two aims is fatal to democracy."¹ In other words, there is, according to Dewey, more than a touch of intellectual snobbery in the traditional idea of a liberal education.

There is a passage in the writings of T. H. Huxley which is well worth quoting here, both because of its high suggestiveness, and because it exemplifies so admirably the point of view here taken about all definitions of education. "That man, I think," says Huxley, "has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear cold logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam-engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself. Such an one, and no other, I conceive, has had a liberal education; for he is, as completely as a man can be, in harmony with Nature. He will make the best of her, and she of him. They will get on together rarely; she as his ever beneficent mother; he as her mouthpiece, her conscious self, her minister and interpreter."²

¹ *Democracy and Education*, pp. 142.

² From "A Liberal Education and Where to find it," in *Science and Education*.

In this noble passage Huxley was really *describing himself*, or at least an ideal self to which he for his part strove to attain. He offered a definition of a liberal education which conformed with his personal outlook upon life. He spoke as a man of science who possessed also a fine literary gift. Newman, on the other hand, spoke as a scholarly and religious recluse who, completely absorbed in the things of the mind and spirit, found it hard to make any terms whatsoever with the things of the counting-house and the market-place. But John Dewey, standing in the midst of a great democratic community, contends that whether a man joins an evening class in applied mathematics because he is an engineer, or joins a tutorial class in economics or literature simply because as a man he is interested in all things human, makes no difference in principle, because each of them is more or less consciously aiming at social efficiency, which is the chief thing that matters. There is something in all these definitions, but not everything in any of them.

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CHAPTER III

IS THEORY USELESS?

The systematic study of education needs defence THE reader who has perused the two preceding chapters may, by this time, be beginning to ask himself when we are coming to something practical, something really useful to an educator. After all, he may say, the main thing in education is teaching, and teaching is an art to be acquired by experience, rather than a science to be discussed in a classroom, or, perhaps worse still, to be excogitated in an arm-chair. He may be reminded, however, that there is not a single doctrine we have mentioned which does not lead to important practical consequences for those who adopt it and act upon it. It does make a great practical difference whether we do or do not act upon the supposition that most people's education ends at fourteen or fifteen, whether we do or do not believe that the vast sums annually devoted to the education of "the masses" are largely wasted because of the prevalence of low "intelligence quotients," whether we do or do not believe in an education for leisure, and in what sense we believe in an education for citizenship. Every practical detail of a teacher's daily work may be coloured by his having thought out such questions as these, or by his having deemed it not worth while to so do. Still, it may be objected that the study of education, especially since the extensive annexation of the field of education by the experimental psychologist, tends to be insufficiently related to the fundamental position in all education that goes on in schools, which is a very human position—simply that of a man or woman faced by a group of children, and influencing them in a thousand ways day after day and week after week. The study of education, as carried on in places where teachers

are trained for their calling, therefore appears to require some explanation and justification.

Mutual antagonism of theory and practice A mutual lack of respect between the theorist and the severely practical man is no new thing, and is by no means confined to the case of education. The practical man is apt to regard the theorist as a dreamer and a pedant, whereas the theorist in his turn is apt to despise the practical man as a mere mechanic, a rule-of-thumb man, a person swayed entirely by custom and tradition, thinking it sufficient to do his job as others have done it before him, to tell the tale as 'twas told to him. The two extreme types have always existed and they still exist; and probably most of the uncomplimentary things that each kind of extremist has said about the other have been richly deserved. In such a case we may be pretty sure in advance that both extremes are wrong, and that the truth lies somewhere between. Some of the extremists on the one side wish apparently to make education a branch of applied psychology, and to reduce its practice to the mechanical application of so-called scientific principles. Some of the extremists on the other side would apparently make a bonfire of all the books on education that were ever written. The effort to compose these glaring differences is worth while, because it will help to bring out the true relations between science and art, theory and practice.

Its existence in ancient times As we have stated, this antithesis between theory and practice is no new thing. It is at any rate as old as the ancient Greeks. The slightest acquaintance with Plato's dialogues reveals, as one of their essential features, the tendency to suspect mere custom and tradition, and to bring them to the bar of reason. The commonly accepted intellectual and moral standards were subjected to the most searching and even exasperating criti-

cism. Experience, the mere doing of things, was regarded as a state of bondage, from which reason could set a man free. Thus reason came to be placed above experience, the thinker was exalted above the doer. Plato's famous statement that kings should be philosophers or philosophers should be kings is best understood as "a statement that rational intelligence, not habit, appetite, impulse, and emotion, should regulate human affairs." Aristotle again distinguished between theoretical and practical knowledge, to the disadvantage of the latter. Theoretical knowledge he regarded as complete and demonstrative, whereas practical or empirical knowledge is contingent and particular, varying with accidental circumstances. This estrangement between theory and practice, between the contemplative and the active life, lasted on into modern times, and has its modern counterpart in the preference shown for theoretical studies in our schools and universities, and also in the preference shown for black-coated occupations. The main business of some people is to think, to reflect; and the main business of other people is to do, to effect; and the latter has been held to be an inferior sort of occupation. We met a similar distinction in the previous chapter when we discussed the idea of a liberal education

The change wrought in modern times But this exaltation of theory above practice, and of the thinker above the doer, which began in ancient times, and has lasted in some forms down to our time, no longer remains unchallenged. The challenge has come chiefly from the modern scientific spirit. Great as were the achievements of the Greeks, there has here been a complete change from the Greek attitude. "Even Greek mechanics remained a branch of geometry, not available for the investigation and explanation of natural events, because of the Greek contempt for manual work and machinery."¹ Modern science has changed all that, for experi-

¹ Dewey Art. "Theory" in Monroe's *Cyclopaedia of Education*.

ment is the very soul of modern science, and experiment means the closest connection of thought and practice at every step. This marriage of thought and practice has been cemented by the consequences which followed upon the industrial revolution. So long as practice meant mere routine, custom, tradition and rule-of-thumb, what could be more natural than to place it below reason in the scale of values? But in modern industry the worker in the factory is, whether he always knows it or not, in close alliance with the worker in the scientific laboratory. "The improvement of craftsmanship depends in large part on the absorption and adaptation of scientific discovery." So far has this change gone that "a new class of worker is growing up—consisting of men engaged in research associations and industrial research laboratories. . . They are bringing back with them into craftsmanship the scientific knowledge which is one of its essentials. They can speak with the employer as men also trained at university and college—and, at the same time, they are fellow-workers with those in the shops, and can bring back there some of the interest and enthusiasm which springs from understanding of purposes and methods."¹ So modern industry is based on science. Practice is permeated by thought.

The modern distrust of theory The old historic misunderstanding between the man of reflection and the man of action, between the thinker and the doer or manual toiler, has thus become far less acute. And the change has been wrought chiefly by that interpenetration of thought and action which is of the very essence of modern scientific method. So far has the change gone that the old undervaluation of the practical man by the theorist has in some measure given place to a new undervaluation of the theorist by the practical man. Thus the old-fashioned farmer is apt to

¹ Bragg, *Craftsmanship and Science*. (Presidential Address to British Association, 1928.)

regard with amused contempt the product of the agricultural college; the old-fashioned doctor may sniff at some of the new-fangled practices of modern surgery; and the old-fashioned manufacturer may decline to scrap his obsolete plant on the recommendation of the up-to-date engineer. In part these differences may be explained as an aspect of the eternal conflict between the progressiveness of youth and the conservatism of age. But this explanation can only be partial, because the progressives are not always young and the conservatives are not always old. It is more a question of temperament than of time of life.

Distrust of theory in the field of education In any case, there is no department of activity in which the theoretical, or scientific, or reflective point of view is more distrusted than in education. It is hardly too much to say that there is still an almost complete lack of understanding between the educational philosopher (and still more perhaps the educational psychologist) and the average person engaged in the actual practice of education, whether as teacher or as administrator. Why is this so? Partly no doubt because theory always has to wait upon practice. It is for the practical man to put the questions to which the man of reflection has to try to find the answers. Unfortunately, however, the latter has too often attempted to discharge both functions. The arm-chair theorist has too often chosen his own lines of inquiry, and in so doing has become, from the practical man's point of view, lost in a quagmire of more or less irrelevant speculation. Educational theory is at its best when it is regarded as a consistent attempt to answer questions raised in actual practice. It is at its worst, in the sense that it is least profitable, when, for example, it drags in the latest new thing from some kindred sphere of thought, regardless of its real relevance to the teacher's hourly problems. This statement can hardly be gainsaid by anyone who has, for instance, taken the trouble to read the writings of Freud and

Jung and Adler, to mark their wide differences of opinion, to take account of the strictures of their best informed critics, and indeed their violent strictures of one another,¹ and then to examine the rather jejune attempts to base educational theory upon psycho-analysis.

Necessity of psychology to education The science to which educational theory most obviously stands indebted is the science of psychology. This indebtedness, which was never more in evidence than at the present day, has been acknowledged from early times. It is amply acknowledged, for example, in the whole treatment of the subject of education in Plato's *Republic*. "It may seem perhaps," says a distinguished expositor of that great treatise on education, "that a disproportionate space has been given to what belongs not to education but to psychology. But it is just the inseparableness of the two that is so characteristic of Plato's treatment, and whatever we may think of his analysis of the soul in its details, we shall hardly escape the conclusion that some such analysis is an indispensable condition of a really rational theory of education; in other words, that neither a state nor an individual can undertake to educate in a systematic way unless they start with some idea, not only of what they wish to teach, but also of the living being to whom the matter to be taught is relative, and upon whom the given character is to be impressed. The 'practical' man who believes in 'results' will be disposed to regard such psychological considerations as fanciful or far-fetched. And yet the most fatally unpractical thing in the world is to go on testing methods by results which take every factor into account, except the one upon which the whole result ultimately depends. That factor in man is the human mind . . . and to discuss what kinds of education are

¹ E.g. Jung says of Freud: "My scientific conscience would not allow me to subscribe to [his] almost fanatical doctrine [of sex], based upon a one-sided and, therefore, false interpretation of the facts." (*Contributions to Analytical Psychology*, p. 331.)

in themselves best, without considering mental organization is as idle as to discuss what is the best kind of food in the abstract, without regard to the stomach which has to digest it."¹ These words precisely express the spirit in which Plato approached the study of education. And among the moderns the same remark applies to Rousseau, with his insistence upon child-study; to Pestalozzi, with his attempts, crude but essentially right, to "psychologize instruction"; and to Froebel, with his clear and consistent view of the child's instinctive tendencies and of their importance for true education. Never have the great teachers and thinkers failed to appeal to psychology.

Pitfalls in applying psychology to educational problems Yet it cannot be too firmly insisted on that the psychologist has often given the educator a wrong lead, and that there is danger of his doing so even in our own day. We can get from psychology only such help as the state of psychology itself enables it to give; and until quite recently the progress of psychology was extremely slow. Even the very notion of mind, as an object of investigation, did not come all at once. Aristotle, the first great systematic psychologist, propounded a doctrine of a psyche or soul, which constituted with the body an indivisible unity, and which was the controlling and guiding principle of the life of the whole organism. The soul, he said, manifests its activity in certain faculties, such as perception, memory, imagination and reason. He was careful to insist that these faculties are not to be understood as separate parts, each acting by itself, but as aspects of an indivisible unity. But in course of time two things happened. First, a distinction was made and emphasized between the spiritual and the mental aspects of the psyche—between the immortal soul or spirit as

¹ R. L. Nettleship, "The Theory of Education in Plato's *Republic*," in *Hellenica*, ed. E. Abbott. Nettleship wrote at a time (1879) when payment by results was rampant in English elementary education, and he knew it.

studied by theologians, and the mind as studied by philosophers or psychologists. Secondly, the faculties of which Aristotle wrote began to be conceived of as separate parts or organs of the mind, and as causal energies which explain the facts of the mental life. In effect, it was held that just as we see with our eyes and grasp with our hands, so we remember with our faculty of memory, and reason with our faculty of reasoning. Both these changes have had important influences upon psychology, and in turn upon educational theory and practice. To take the second first. If the mind was made up of a number of faculties, the aim of education was to cultivate these faculties, and so it did not much matter *what* was taught, so long as the faculties which constituted the mind were being sharpened and trained. For centuries this was the defence of the "grand old fortifying classical curriculum" for all and sundry.

Discordant psychologies We have seen that in course of time a distinction was made and emphasized between the soul or spirit and the mind, the latter gradually becoming regarded as the special province of the psychologist. The next point to be noted is that another of our familiar distinctions, that between mind and body, was not definitely made until a comparatively late date. Of course, the mystery of the connection between mind and body still remains a mystery, and can only be made the subject of speculation. But the mind came to be identified as that which disappears when one is stunned by a violent blow on the head, or when one sinks into deep and dreamless sleep. In other words, mind became identified with consciousness or awareness. There is only one direct way of studying consciousness or states of mind, and that is the way of looking within, the way of introspection. So the traditional psychology, that by which educational thought has mostly been guided, and until recently based upon the doctrine of faculties, has been an introspective psychology

But in our own time a revolt has taken place against consciousness and introspection. It is said that no really scientific knowledge can come to us by that road. Science is measurement, and the introspective study of consciousness knows nothing of measurement. If psychology is ever to yield valid scientific results, we must, it is said, deny or ignore the fact of consciousness, and study what we can really see and know—the behaviour of the organism. Whatever its merits, this newest of new psychologies is at the moment revolutionizing the application of psychology to education. “Objective measurements” of intelligence, of progress, of fatigue, of effective methods of learning, of remembering and forgetting, and even of the emotions and of character, are now the order of the day and there can be no question of the utility of some of the results so far achieved. But the alleged “failure of introspection” is by no means universally admitted. The psychologists are frantically at odds with one another.¹ Meantime, we must take heed how far we admit their claims to have solved educational problems. For the teacher has to deal, not with the abstractions of a “behaviourist” psychology, but with living, concrete personalities

Fruitful applications of psychology The preceding remarks are meant to suggest that, at the present stage in the history of psychology, we do well to be cautious in accepting and applying the findings of the psychologists, and that our caution should deepen to downright suspicion whenever these findings do not seem in accord with what is usually known as commonsense. The student of education may well be grateful to the descriptive and analytical psychologist for his work, and especially his recent work upon such problems as those of instinct and emotion and sentiment. He should also be grateful to the experimental

¹ See *Psychologies of 1925* and *Psychologies of 1930*, edited by Carl Murchison.

psychologists for the beginnings they have made in the "objective" study of the learning process, the transfer of training, and the testing of intelligence. Though he will not be too ready to base his procedure upon results that are confessedly provisional, he will be on the watch for any light that psychology can throw upon the problem of economical and effective *methods* of learning and of teaching. But when the psychologist ventures further afield, and proceeds to advise as to the *matter* to be taught, or, in other words, to claim to determine on psychological grounds the contents of the curriculum: and, also, when he draws from his results conclusions about the general worth-whileness of particular forms of education—it is then that psychology begins to be a hindrance rather than a help.

The "nothing-but" attitude Some of the claims made by psychology in regard to education remind one of what has aptly been called the "nothing-but" attitude of mind. "Because all forms of life reveal the working of physico-chemical forces, life itself is regarded as nothing but physico-chemical forces. because all operations of mind involve, so far as we can see, the action of a nervous system mind is nothing but the physiological process of nervous action: because at all levels of human life we can trace the forms of human instinct, personality is nothing but instinct; because we can trace in the subconscious, on which for the psycho-analyst all mental life rests, the operation of obscure complexes, the whole of the self is nothing but such complexes; and because in all religion we can trace non-rational elements religion is nothing but a conglomeration of the irrational. Thus an abstraction which is true enough in its proper place as a correlation of a limited set of facts in a limited aspect is erected into a principle to 'explain' a world that lies beyond it. For the rash type of scientist who insists on seeing the whole world in terms of his own science not only is there 'nothing

like leather,' but there is nothing but leather."¹ This is forcible language, but hardly too forcible to be applied to the present strong psychological bias in the study of education, chiefly in America, and, to a less extent, in Britain. So we have, for example, in the words of a Canadian professor, a "flood of intelligence testing that has almost overwhelmed the North American continent"² Some of the most thoughtful of American writers are well aware of the dangers of this tendency "In the emphasis upon statistics, methods, measurements, and practicality," says one of them, "the significance of ideals and appreciations has become obscured There is danger of overlooking the big issues in fatuous admiration of our achievements in detail Unless we know where we are going, there is not much comfort in being assured that we are on the way and travelling fast"³

A philosophy of life in a system of education In helping us to keep "on the way" and to "travel fast," or, in other words, in helping us to achieve effectively and economically our educational purposes, whatever those purposes may be, psychology can and does perform a signal service But if we want help in knowing whither we are bound, and whither we ought to be bound, we must turn from the psychology to the philosophy of education This does not mean that we are under any obligation to study abstruse systems of philosophy and to choose between them It means rather that we must endeavour to make clear to ourselves what we are really aiming at, and what we ought to be aiming at, in trying to educate a child It means that every school and college curriculum stands for a certain valuation of knowledge, an assertion as to what knowledge is of most worth It means that every plan of school organization, and every system of

¹ F. Clarke, *Essays in Politics of Education* p. 11.

² P. Sandiford, *Educational Psychology*, p. 152.

³ B. H. Bode *Fundamentals of Education*, p. 241.

school discipline, is implicitly a confession of faith as to the kind of character and personality that we seek to shape. The difference between the traditionalist and the reformer, between the humanist and the realist, between training for livelihood and training for life, between rigid and free discipline, amounts to a difference in the estimation of human values. When school managers provide the means of teaching children how to do sums and learn catechisms, but do not provide the means of training the children in decent personal habits, they exhibit their estimate of human values; in other words, they exemplify their philosophy of life—a philosophy which makes failure to do a sum in long division more serious than forming dirty habits. The psychologist, as such, is in this case concerned only with the mechanism of habit formation, whether the habit of manipulating figures, or the habit of keeping the mind and the body clean and sweet. The philosopher is concerned with human values, and it is the philosophic attitude that we must cultivate if we are to attack with fair hope of success the problem of what to teach, and what else to aim at in our teaching.

An example That every system of education has, as a matter of fact, a philosophy, a general view of life, at the root of it, could be illustrated by numberless instances—by England's "public schools," by her municipal secondary schools, by the operations of the Workers' Educational Association, by the American high schools, by the Danish Folk high schools, and so on. A very remarkable instance is that of pre-war Germany, which provided a powerful object-lesson in the close connection there can be between a philosophy of life and a philosophy of education. That philosophy of life was based upon the idea of Kultur—the great achievements and creations of the German mind; its language, literature, art, science, history. To be a thorough German meant acquiring the elements of the national Kultur. Hence the transcendent

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importance of education. So far, so good. But from this idea certain important consequences for education followed. Since the nation was regarded as the determining factor of life, a spirit of national egoism was breathed into the schools and universities. And since the object of all education was the transmission of a certain mental capital, a passing-on of knowledge, education came in practice to be regarded as above all else intellectual culture, in spite of the suggestions of the theorists that it meant also the moulding of character. And, lastly, since the state was the visible embodiment of Germanism, the owner of Kultur, it followed that "education, which is but the life-blood of Kultur, must belong absolutely to the state."¹ Whereas in America the professed ideal was that of a school created by the people for the people, in Germany the professed ideal was that of a school created by the state for the state. And this difference of ideal may mean a mighty difference in every detail of the functions of a school. The proof is plain enough that a philosophy of education implies a philosophy of life.

Is there a science of education? Throughout this chapter we have assumed that we are justified in speaking of a theory of education. The proper correlate of the word "theory" is the word "practice," so that we have only been assuming, what is sufficiently obvious, that in the pursuit of any human occupation—whether teaching, healing, nursing, cooking, farming, or what not—at times there comes a point at which the intelligent practitioner ceases the actual practice of his craft, perhaps lays aside his tools, and puts on his considering cap. We all theorize more or less about our occupations, and the only question is whether our theorizing is clear-headed or muddled. There is, then, a theory of education, corresponding with its practice. The question is sometimes raised whether

¹ See *German and English Education*, by Dr. De Hovre, of Louvain University (1917).

education can properly be called a science. Much depends upon what we mean by a science. The usual correlate of the word "science" is the word "art." The object of a science is the extension of knowledge, whereas the object of an art is to get something done: thus we should say that chemistry is a science, and agriculture an art. But chemistry and other sciences have been so successfully applied to agriculture that we have come to speak of the latter as a science. We are aware, however, of a difference, and the difference may be expressed by saying that chemistry is a pure science, and agriculture an applied science. We should thus use the terms art and applied science synonymously. If, then, we are to speak of a science of education, it is an applied science, and among the pure sciences to which it is beholden are psychology and physiology.

The scientific study of education in America If by saying that the study of education is a science we simply mean that it should involve systematic thought, no possible harm can ensue. But if we have in mind the maxim that "science is measurement," as it clearly is in the case of the mathematical and physical sciences, and as it is more than ever in the biological sciences, we must be more cautious. The cultivation of educational research in this sense has, as we have seen, gone to its greatest lengths in America, and an American writer is quite justified in saying that his country has become "in a unique sense the home of educational science," and that "there never has been a writer bold enough to attempt the fiction that Europe has a science of education."¹ The most pronounced feature of the study of education in America is its "objective" and quasi-mathematical character. "Can it be measured?" is the universal question concerning anything educational. Not only general intelligence, but skill in arithmetic, and handwriting, and com-

¹ C. H. Judd, *The Unique Character of American Secondary Education*, p. 57.

position, and reading, attainment in other branches of the curriculum, conduct, and character,¹ the rating of teachers, are all made the objects of precise measurement expressible in cold figures. Another example, which to most Europeans would appear a more promising one, of the application of scientific method to the study of education, is seen in the way in which America attacks the problems, many and varied, of educational administration. In England, experience and ordinary common sense are supposed to be a sufficient equipment for an educational official, such as an education officer or an inspector. The contrast with America is complete. There, educational administration is made the subject of systematic investigation in the greater teachers' colleges and university departments of education, and definite courses are offered for the benefit of persons aspiring to become principals and superintendents. Moreover, the professional staffs undertake systematic surveys of the educational needs, present and prospective, of areas whose authorities apply for such help.

The expert in America and in England The above examples go to show that, speaking broadly, America believes in the scientific expert, whereas the Englishman's natural tendency is to distrust him, and to rely upon empirical and common-sense methods. The explanation of this difference appears to lie partly in the fact that, happily or unhappily for her, America has no traditions in the sense in which England has them. In a country in which huge cities have grown up within fifty years, and in which magnificent efforts have been made to keep pace with these rapid growths, so that the dangers of an ignorant and multi-racial democracy might be averted, it became a matter of sheer necessity to proceed on scientific lines. A social structure which had been created by the application of scientific methods had to be

¹ See *Studies in Deceit*, and *Studies in Service and Self-Control*, by H. Hartshorne and H. M. May

civilized by the application of those same methods. Other factors which contributed to the need of developing a science of educational method and of educational administration were (1) the prevalence of small areas, often with local authorities more benighted than were our own small school boards during the period 1870-1902, and (2) the necessity of employing a large number of inadequately trained teachers. The imperfections of the rank-and-file make it all the more necessary that expert guidance and direction should be available.¹ Perhaps it is true to say that at present the scientific expert gets more than his due in America, and less than his due in England. But it seems highly improbable that the time will ever arrive when the "educational engineer" will become very powerful in England, so great is the Englishman's respect for tradition, and his desire for the free play of individuality, even at the cost of much "muddling through."

It ought to be added that, even in America, where the vast scale of things gives every encouragement to mass production and universal standardization, a still small voice of protest against the worship of the "psychological joss" is sometimes heard. In a delightful volume of essays on education, an American teacher begins by warning his readers that "he has never studied 'educationally' 'the child' or anyone else—professionally. He has never prepared a chart of pedagogical statistics. Above all, he has never measured anything. He is neither a 'pedagogue,' an 'educator,' nor anything else difficult and technical. He is merely a teacher who has loved his work in his day, and delighted in the companionship of his students . . . one who feels assured that just as there are a hundred different ways to write a novel, all of them good, so there are innumerable enchanting paths threading the luxuriant

¹ Hence the well-known difference between the English "inspector" and the American "superintendent." Broadly speaking the former is an adviser, and the latter a director. The former expects the teacher to supply the driving force, the latter supplies it himself. See Cubberley's *Introduction to the Study of Education*, ch. vii.

meadows, gardens, and jungles, of knowledge, all of them safe and of happy outcome, however we may seek to run a superegregatory concrete boulevard of pedagogic method through their diversity and beauty."¹ Thousands of fine teachers would bear similar testimony. But the present volume is written in the belief that this is not quite the end of the matter. If theory is useless, it is not because it is theory, but because it is bad theory.

¹ Prof. F. E. Schelling, of the University of Pennsylvania, in *Pedagogically Speaking*, p. vi.

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The topics of this chapter may be further studied in the books by F. Clarke and B. H. Bode already mentioned. See also: J. Dewey, *Democracy and Education* and *School and Society*; A. G. and E. H. Hughes, *Education: Some Fundamental Problems*.

On the bearing of psychology on education, see C. Fox's *Educational Psychology* (sound and keenly critical), Drever's *Introduction to the Psychology of Education*, Valentine's *New Psychology of the Unconscious* (both combining what is most helpful in the old and the new psychologies), Sturt and Oakden's *Modern Psychology and Education* (an interesting introduction), Sandiford's *Educational Psychology* (a thorough handbook of "objective" non-introspectional studies), Bode's *Conflicting Psychologies of Learning* (a review, by one who appreciates the limitations of psychology as an aid-science of education), Woodworth's *Contemporary Schools of Psychology* (points the way to "the middle of the road"), and C. S. Myers's *A Psychologist's Point of View*, especially the chapter on Education and Vocations. See also: A. G. and E. H. Hughes, *Learning and Teaching*.

CHAPTER IV

EDUCATIONAL INSTITUTIONS OTHER THAN SCHOOLS

A BOOK on education is naturally expected to give prominence to what is done in schools and colleges. Whether we restrict our survey of educational institutions to schools and colleges must depend upon whether in this connection we choose to understand the term education in the narrow or in the broad sense to which reference has already been made. Schools must occupy our attention for the most part, but there are advantages in considering other institutions which, for better or worse, are certainly exercising great intellectual and moral influence upon all sections of the community. Let us agree to recognize explicitly that in a real sense teachers are not the only educators, and that schools and colleges are not the only educational institutions. In other words, it is life that educates, and schools provide only a part of life's experiences even in childhood. Some of the other institutions we have in mind, such as public libraries and museums, are definitely meant to subserve broadly educational purposes, whilst others, such as theatres and moving pictures, though for good or ill unquestionably educational in their effects, are usually intended by their promoters only as means of amusement, and are managed on a frankly commercial basis. But this distinction we may here ignore. We simply look around us, and ask ourselves what other educational influences, besides those of the school, which we reserve for fuller discussion hereafter, are, as a matter of fact, acting upon men and women, boys and girls, as we see them in ordinary life.

Religious organizations No sort of irreverence or disrespect is involved in placing religious organizations, which for our present purpose are practically the various Christian churches, alongside the so-called secular institutions, because we are considering all alike simply as educational influences. Upon the special and unique mission of the churches in the community, readers of this book may hold different opinions, which opinions, however, are here irrelevant. Nor are we concerned at this point with any claim on the part of the churches to exercise partial control over the school system. From the child's or the young person's standpoint, church or chapel exists as one of many places which he attends more or less regularly and willingly, and from our present point of view we see church or chapel simply as one part of his social environment, by no means to be ignored by the educator specifically so designated. Whatever view we may hold about the authority of the various churches, we are bound to recognize them as educators of the nation. For one thing a preacher is in a sense a public teacher, and sometimes a powerful one. Also, the literary and historical and musical aspects of a church service may be of high cultural value, and indeed were until recent times almost the only means of adult education. Above and beyond all, the churches stand as historical witnesses to the supremacy of the spirit. Other organizations bear similar witness to a greater degree than ever before, and if the churches seem to do less for education than they formerly did, it may be only because other organizations are necessarily sharing the work. It must be remembered, too, that within living memory the churches and chapels were often the only centres of social life in English towns and villages, and that they are no longer so. On the whole, therefore, diminished attendance at church services cannot be accepted as a proof of moral and religious decline. The same remark applies to Sunday schools, many of which first existed for the purpose of giving elementary instruction in reading and writing and even

arithmetic, but gradually changed into places of religious education only. The newer organization of Sunday schools has given them a fresh lease of life, and their continued success, especially for children whose home conditions are unfavourable, is devoutly to be wished. But on the whole a certain decline in the numbers attending Sunday schools cannot be regarded as counting for unrighteousness, if due heed is given to the other educational influences which have increased in strength. It must be confessed, moreover, that many parents in Victorian times sent their children to the Sunday school in order that they themselves might have an undisturbed nap on Sunday afternoon. Small blame to them, whose hours of respite from labour were so few on the other six days!

Dramatic art To an older generation it would have seemed incongruous to count the drama among educational agencies, and blasphemous to mention the theatre and the church in the same breath, as we do here. If we go back to Elizabethan times, we find the theatre fiercely denounced as a sink of iniquity¹; and its reputation among puritan folk was not much higher in the Victorian period. In our own day, the professional theatre, though setting a high standard of acting and production, cannot be regarded as a consistent ally of church and school. For its aim is to supply a miscellaneous public, of varying ethical and aesthetic standards, with what that public seems to want for its amusement; and it does so for payment received. Yet there was a time, before a race of professional actors arose, when church and school could regard the dramatic art as a powerful means of spiritual influence; and there are abundant signs that play-acting, as our forebears contemptuously called it, is coming into its own again in education, not merely as a sugar-coating for the pills of the curriculum, but as psychologically sound procedure. Play-acting, because of its imaginative appeal, corresponds with

¹ See J. Dover Wilson, *Life in Shakespeare's England*, chap. vii.

something that lies deep and ineradicable in human nature—something that refuses to be ignored or expelled. Like any other form of human activity, the drama may be made to subserve the silliest or basest as well as the noblest of purposes. And that is precisely the reason why it must be taken seriously into account in any scheme of education. The dramatic art now permeates much of our best teaching, from the kindergarten upwards, and it is becoming an increasing force in adult education, not, we repeat, merely to amuse, but because of its essential effectiveness as an instrument of culture. And perhaps the chief hope of a less debased professional theatre than we now possess lies, not so much in an active censorship¹ as in the amateur acting, in every town and village, of plays that are really worth the time and trouble spent in rehearsing and producing them. In this connection the word “amateur” often reverts to its old and proper meaning. Amateur acting is by no means necessarily poor acting; it is acting which is done for the love of the thing, and not with a view to gain.

The cinema Some of what is best, and much of what is worst, in the theatre have been repeated in the motion-picture show, the cinematograph, or, to use the convenient abbreviation, the cinema. There is no need to give figures which would soon be out of date, but it is enough to know that cinemas abound in every fairly populated country. Some of the films exhibited are definitely called educational, and they illustrate subjects drawn from industry, travel, history, biology, and even religion. But in this chapter we are concerned rather with those more general influences of the cinema which depend upon dramatic films, news films, propaganda films, and so on. Like the theatre, the cinema provides occupation for the increasing leisure of the people, and, like the theatre, it provides

¹ People who advocate the abolition of the censorship ought, if they were logical, to advocate free trade in firearms and noxious drugs. “The love of money is a root of all kinds of evil,” and there are some people who will do *anything* for money.

the public with what the public is supposed to want. As so many of these films come from America, the opinion of an American is specially to the point. "Other forms of dramatic entertainment," writes an American professor, "are as nothing compared with the movies, many of which do not rise higher than the mental level of a ribbon clerk. The elements are fairly constant; the speeding automobiles, the rushing train, the glycerine tears that ooze from the great eyes of the heroine and trickle down her fine-wrought face, the comic policeman, and the slap-stick clown—a little silly, a little sentimental, a little suggestive. But the men in the movie-house audiences, it used to be said in the pre-arid days, are those who would otherwise be spending their time and money in saloons. 'Better the movie than the bar' was the cry. Personally, I doubt it much."¹ From all one has heard of the American saloon in "pre-arid" days one is disposed to regard this judgment as erring on the sardonic and high-brow side. The popular enjoyment of some of these productions represents partly the defective education of the masses, and partly the evening reaction from a day's work done under modern industrial conditions. There is no reason why the cinema, without becoming too obviously and crudely a diffuser of instruction, should not become a powerful instrument of education, both juvenile and adult. That it is often so is matter of common knowledge.

Broadcasting More recent in its origin than even the cinema is the "wireless,"—sound and television—modern marvels which are properly regarded as distinct additions to those broadly educational or cultural agencies which exist apart from, and in addition to, school and colleges. As is usual with a new movement, the most extravagant claims were at first made for the educational value of broadcasting. To this point we shall recur in the chapter on "Teaching and Learning." We here view broadcasting as an agency, existing side by side with

¹ Dr. G. J. Laing, in *Education and Life* (ed. J. A. Dale).

others which go on educating people all through life, whether meant to do so or not. The most obviously effective result of broadcasting is that the musical culture of the people is being raised to a level that was formerly impossible, and this result is intensified by the fact that the broadcasting of good music performed by first-rate musicians has stimulated the demand for gramophone records of such music. Music is a clear case in point, because music is the art which appeals entirely to the "listener." But the same principle which governs the success of broadcast music is probably at work in all the best forms of broadcasting. As the success of musical programmes depends upon first-rate conductors and performers, so the success of other items depends upon authoritative speakers possessing first-hand knowledge. A travel talk by a real traveller, a social talk by a social worker, a history talk by one who has made the subject his own, a literary talk by a well-known writer, a talk on science by a distinguished man of science—these are instances of the most effective broadcasting. But, of course, the value of all such talks depends upon whether they act as a stimulus to thought, and not merely as a form of amusement. If we have chosen the more serious items of a broadcast programme for special comment, it is not that we underrate drama, or the frivolous vaudeville item. The latter may have a truly educational effect by setting a standard of innocent fun.

Newspapers Prominent among the institutions we are noting in this chapter is the daily newspaper, that constant educator, again for better or worse, of the whole reading public. Since the closing years of the nineteenth century a remarkable change has come over most of British journalism. In what may now be called the old days, the page of a penny newspaper looked prim as compared with its successor of to-day. The reader is no longer left to form his own judgment as to the relative value and importance of news. Bold staring

headlines proclaim that he is relieved of the trouble of judging for himself. In the more popular press, relatively impartial reports of the utterances of eminent persons are replaced by personal (and not impartial) "impressions," written up by "our special correspondent." Formerly the newspapers were read, of course, by the better-educated classes and also by the more intelligent members of the manual working classes. They were not much read by most working men, and hardly at all by their wives and daughters. All this is changed. In the 1890's the great newspaper magnates grasped the fact that, owing to the operation of the Education Acts from 1870 onwards, practically everybody could read, i.e. could decipher printed matter. A market had been created for printed gossip, making little or no demand upon the reader's intelligence, but serving the purpose of amusing him, relieving him from boredom, and informing him about the doings, and especially the misdoings, of his "betters." It is not only by what the newspaper includes and omits, but by the amount and prominence of space given to different items of news, and, still more subtly, by the varieties of type employed, that the public gets what the public is supposed to want. There is something to be said for the dictum of a modern journalist, that an educated man is one who cannot be humbugged by a newspaper. If so, the inferior type of newspaper may become a negative test, as the superior type is certainly a positive means, of sound education.

The popular magazine A step removed from the daily paper is the popular magazine, the weekly or monthly production of the cheaper kind—for of the better kind, appealing to people of superior education, there is no special need to speak. Here we have further evidence of the effects of a ramified system of teaching children to read, and then leaving it to chance what they do read as they grow up. There used to be a great vogue of magazines filled with snippets and "titbits," possibly the direct outcome of the kind of

reading-books used for decades in the schools, even in the top classes—books which consisted solely of brief extracts, and which discouraged continuous attention to anything in particular. But besides this kind of production, there is the magazine containing chiefly short stories and sketches. In this class of work England and America vie with each other, and in the matter of lavish illustration America led the way. It is, therefore, not inapt to quote again our American professor on the subject of the cheap magazine. "Those who want humorous sketches," says he, "will find them here, some written by humorists, and some by authors who mistake themselves for humorists. For those who are interested in sports there is fiction of a curiously constant type, in which some young rustic, at the crisis of the game, achieves play of such startling brilliance that the feats of the most famous cricketers sink into insignificance. Or if one wants a purple love story, he may find it here—a tale in which you will find the girl with delicately pencilled brows, quizzical eyes, and curiously sympathetic mouth; with her complement, the young hero, who is invariably equipped with a very firm jaw, and who is as brave as a lion, as lithe as a panther, as cool as a cucumber, and as handsome as a tailor's advertisement. . . . But it would be a gross injustice to imply that no people carry their reading beyond the popular weeklies. There are large numbers who add to these the works of . . ." let us say, Guy Boothby and Ethel Dell.

This is a somewhat depressing picture, and one is glad to be able to add that there must be another and a brighter one. Otherwise, how could it happen, for example, that publishers have been willing to invest large amounts of capital in the production of cheap reprints of great authors? That also must be to some extent a result of the operation of successive Elementary Education Acts, though to how great an extent it is extremely difficult to say. Anyhow, the writer quoted above is so far right that it would seem a doubtful boon to confer on a child, merely the ability to read, with no training in the use to

be made of that ability. Huxley was within the mark when he said of reading and writing—"I protest that if I thought the alternative were a necessary one, I would rather that the children of the poor should grow up ignorant of both these mighty arts than that they should remain ignorant of that knowledge to which these arts are means."

The advertiser The newspaper and the magazine suggest a few remarks about the modern advertiser, without whom the newspaper and magazine could not exist at their present prices. There is growing up a considerable body of literature, both in England and in America, but especially in America, on the psychology of salesmanship and advertising. At its best, salesmanship is obviously a legitimate art with a communicable and an endlessly improvable technique. At its worst, it calls in the aid of the psychologist to enable it with scientific thoroughness to persuade weak-minded people to buy things which they do not need and cannot afford. But it is with the salesman as advertiser that we are here concerned, because he is unquestionably one of our public educators, especially in aesthetic appreciation. A distinguished artist, speaking of Piccadilly Circus after dark, with its gas or electric advertisements of wine and tobacco and soap, called it the ugliest spot in Europe. Now, it is fairly certain that no small child would agree with him. And that is the real point. A child's aesthetic judgment would pronounce the scene pretty, or even "lovely." And that judgment would be confirmed by adults who, on the aesthetic side, have never passed beyond childhood, and even by better educated adults when they relapse into the irresponsible gaiety of childhood. But apart from these infantile displays of taste, the streets of our towns, even if we omit the slums, are quite unnecessarily ugly. It is said that God made the country beautiful, and left it to man to make the town beautiful. With his ugly advertisements man often does his best to thwart God's intentions regarding the

country, and he has so far made rather a sad mess of his towns. Ugly pictures, ugly lettering, ugly colours, ugly shop-windows many of them filled with "expensive trash,"¹ are the modern advertiser's contribution to the education of his fellow-citizens.² Would that every school and college could be made a centre of missionary effort towards the redemption of our towns from ugliness—a near relation of ignorance and vice! It is all a question of better education, and not a question of money.

Libraries The belief that schools are the only places, or, in some ways even the chief places, in which the education of the people goes on, receives a decisive check when we contemplate the operations of public libraries in a modern civilized country. In the provision of libraries, as in that of schools, England has no record to be proud of. The old governing classes needed much persuasion before they became convinced, or, rather, acquiesced in the conviction of social reformers, that the real danger to the state is ignorance, not knowledge. Long before Parliament took effective action, voluntarily supported libraries had grown up in many places, and did a most useful work. As far back as 1839, Lord Brougham challenged the House of Lords to produce five members who knew as much of the higher mathematics as certain working men of his acquaintance had got from books. And many people—among them the present writer—have borne grateful testimony to what the mechanics' institutes did in providing libraries for folk in country towns, at a time when no public libraries were available. It was in 1849 that the House of Commons appointed a Select Committee to report on the best means of extending public libraries. The Committee's report was admirable, and if progress was very slow in

¹ A. Clutton-Brock, *The Hope for Society*, p. 49.

² The advertisements of some of the larger industrial companies are an indication of better things.

subsequent decades, it was certainly not for lack of vision and guidance on the part of this pioneer Committee. One of the witnesses, an assistant in the British Museum, had made extensive researches into the provision of books in libraries accessible to the public in Europe and in America. He illustrated his results by means of a "map of Europe in which the British Isles with 53, and Holland with 63, books to every hundred of population, were coloured coal-black. A less dark hue was accorded to Portugal and Russia with 76 and 80 volumes, while the light shading of Switzerland and Denmark and the smaller German States demonstrated that the number of volumes reached respectively 350, 412 and nearly 450 to every hundred of the population."¹ In England a beginning of better things was made by the Public Libraries Act of 1850, which enabled town councils in the larger towns to apply the proceeds of a halfpenny rate to the provision of buildings, but not of books. Even in this form the law was passed by a majority of seventeen only. Slow but steady progress was made by a succession of new Acts, but it was not until near the end of the century that rapid progress was made, and the secret of that progress lies in the name Carnegie. For it was through the munificence of that great benefactor Mr. Andrew Carnegie that a tremendous impulse was given to the building and equipment of libraries. Later on, the Carnegie Trustees turned their attention to the provision of circulating libraries for rural districts. Thus at last, eighty years after they had made their report, the dream of the Select Committee of 1849 came true, and now practically the whole population of England and Wales resides in library areas. All that is being done by trained librarians to educate the public in the use of libraries, by means of carefully classified catalogues and descriptive hand-lists, counts among the best of educational work.²

¹ *Report on Public Libraries in England and Wales* (1927), p. 11.

² An excellent example is *Books to Read*, meant for boys and girls between 12 and 21, and published by the Library Association, with the help of the Carnegie Trust.

Museums and art galleries In comparison with our progress in the provision of well arranged libraries, the position as regards museums and art collections is extremely unsatisfactory. We have, of course, our great national museums and galleries, which on the whole will bear comparison with those of any other country in the world, and we have also a large number of public museums other than these. But partly through lack of adequate financial support, and partly through lack of clearly defined aims, these institutions fall very far short of achieving their maximum effect upon the intellectual and aesthetic life of the people. A museum, whether a great or a small one, must fulfil certain conditions, if it is to be a real instrument of education. If it be a mere collection of miscellaneous odds and ends, then, however interesting each item may be in itself, the museum as a whole provides only brief periods of amusement for gaping sight-seers. To achieve its true object, that of promoting the education of the people, it must have its own individual purpose or set of purposes, the objects must be carefully classified on sound historical principles, unnecessary duplication must be rigidly excluded, the arrangements for actual exhibition must be adequate, funds must be available for suitable extensions and for filling up gaps, a supply of well-trained curators must be gradually made available—and, to crown all, the arts of the advertiser must be fully enlisted, in order that the public may be made aware of the treasures that are at the disposal of all who value contact with realities, as distinguished from the descriptions to be found in books.

As a nation, we began well by establishing the British Museum in 1753 and the National Gallery in 1824, but our support of such means of education as these has by no means kept pace with our national provision for all other forms of education. Our museums and art galleries have been called, not without good reason, the Cinderella of our social services.

Vocation We now turn to a very different subject. It is sometimes said that, quite apart from what is usually called vocational education, i.e. the sort of education that is carried on in technical and professional schools and colleges as a *preparation* for the practice of one's calling, that very practice itself should provide a valuable education all through one's working life. Obviously this is true, or ought to be true, of those occupations which are called professions, because the practice of them constantly presents fresh problems, "cases" not quite like any that have occurred before in the individual's experience, problems not to be solved by rule-of-thumb methods, but requiring the intelligent application of general principles. If a doctor or a teacher is not continually educated by the practice of his vocation, the fault must lie with himself.¹ At the other end of the scale are those purely mechanical occupations of which that of the factory "hand" is the outstanding example. For people so occupied the only hope, as we saw in an earlier chapter, is in education for leisure. But between these extremes lie a whole host of occupations which ought, if rightly practised, to provide exercise for brain as well as hand. Here, of course, there must also be education for leisure. We may heartily agree with Browning when he wrote:

"I want to know a butcher paints,
A baker rhymes for his pursuit,
Candlestick-maker much acquaints
His soul with song, or, haply mute,
Blows out his brains upon the flute."

Yet one would also fain know that the butcher could explain scientifically why it is wrong to expose a joint, not only to the light of day, but also to its dust and heat; that a baker understands enough of biology and physics to see that he need not be a merely mechanical drudge; and that a hairdresser has a

¹ At their best these are the fortunate people for whom "work is play and play is life; three in one and one in three."

sufficient acquaintance with physiology and hygiene to make him a really clean and intelligent practitioner of his art. An interesting study might be made of the census returns of people's occupations, and of the possibilities they contain of providing a lifelong intellectual or aesthetic interest. Possibly the conclusion would be reached that in many cases the best time for a formal technical training is between twenty and thirty years of age, rather than between fifteen and twenty.¹

Scouts and guides Among the most remarkable of the educational agencies that lie outside the school is that modern miracle the boy scout (with its counterpart the girl guide) movement—remarkable because, owing to the system under which he works, an untrained scoutmaster may be a more effective educator than a trained teacher. Wherein lies the secret? The problem was to devise a plan which should secure a thorough training of character, of those attributes which go to make a good manly citizen, and the problem was solved by one who had a clear vision of boy nature, and of the kinds of activity which would infallibly appeal to that nature. It is because scouting is a good game, because it invokes the spirit of play, and turns that spirit to high purposes of which the boy may be only dimly aware, that it is so powerful an instrument of education. Possibly Baden-Powell never heard of Froebel. If so, he was the most distinguished of modern Froebelians without knowing it. He tried to make the boy useful in his particular way, useful to himself and to others, by making him a handicraftsman of one sort or another, by developing habits which have their educational value apart from their value in technical skill. Next, he sought to teach service for others, which, he said, is after all the basis of the boy's religion, whatever form it may take—his duty to his neighbour, his patriotism and his ideal of self-sacrifice on

¹ So Dr. Snedden in *Objectives and Problems of Vocational Education* p. 408.

behalf of others or of the state. Then came the question of health, which is not a matter of putting the boy through some drills, but of getting him to regard his body as a trust, for the well-being of which he is responsible. But the point is that the scout movement seeks to realize these aims by means of a plan, as original as it is simple, which resolves itself into a glorious and engrossing game. The scout movement, besides being a supplement to the school, is in some ways a pattern for the school.

The family But so far we have not mentioned the oldest educational institution of all—the family. If we go back to a sufficiently primitive state of society, we find no distinction made between home and school. The Old Testament, for example, tells us of no schools for children among the ancient Hebrews. The parents were the chief teachers, and the home the only school. An almost stern obligation rested upon the father to undertake the moral instruction of the children, whom he was to teach diligently as he sat in the house or walked by the way; and the children were enjoined to keep the commandment of their father, and to forsake not the teaching of their mother. It was only when social life became more complex that the need of schools began to be felt. Until then, the family was the one supremely important institution. Not only so, but within the family group the father was the supremely important person. The stories of Abraham offering up Isaac and of Jephthah's daughter remind us that in early times the father possessed the right of life and death over his children, who were his property, as were, indeed, also their mother or mothers. Later on, this arbitrary power disappeared, but disobedience to parents (any sort of parents) was still regarded as a fault which, though not punishable, inevitably brought the offender to a bad end. No practical purpose would here be served by recalling these ideas, were it not that they lived on in people who were brought up on a largely misunderstood Bible.

The heavy Victorian father was a despot, and often an ignorant and obstinate despot. And only so long ago as 1861 a Royal Commission reported that in their opinion the British parent would never abdicate his rights over his children so far as to allow himself to be compelled to send them to school. Quite apart from the brutal or negligent parent, and the squalid "home," the family as a social institution has been subjected to somewhat drastic treatment in recent times. We hear less about the duties of children to their parents, and more about the duties of parents to their children.

So much has the family as an educational institution suffered in reputation that some modern thinkers have leaned to Plato's view that the private family should be abolished, and that the whole community should form one family. In principle, Plato's view is not quite so fantastic as it seems, at least it ought not to seem fantastic to people who go so far as to say that "men should brothers be, the wide world o'er." But Plato's family communism was soon faithfully dealt with by Aristotle, and indeed the private family at its best, or even at its second or third best, is far too potent and beneficent an instrument of moral and, often, of intellectual culture, to be so readily disposed of. Normally it is at home with his mother that the child learns to walk and to talk, to distinguish between *meum* and *tuum*, to learn the simplest properties of the things around him, to take his bearings amid his physical and social surroundings, and to form some of the deepest of human affections. As the years pass his social environment becomes wider, but still his home remains the centre of his universe, possibly until he founds a home of his own. And if the home and family are thus powerful factors in the development of the child, hardly less are they so—although the fact is commonly ignored—in the development of the parents themselves. No one who has had the experience of helping to bring up a family, and who tries to imagine what his life would have been without that privilege, can miss the conclusion that parenthood fur-

nishes some of the best ingredients of "adult education" taken in its broadest sense. On the whole, then, though unfortunately with too numerous exceptions, the family takes rank as a powerful and an abiding educational agency, it may be all through life. It is true that the state has extended its supervision of children up to the age of fifteen, and down to the age of five, that it now proposes to extend that supervision down to the age of two, that it offers assistance to mothers before and after the birth of their children, and, generally speaking, that parental responsibility is supplemented—some prejudiced people would say undermined—by the activities of the state. These and other causes, such as the earning power and the consequent independence of adolescent boys and girls, are changing the family as a social institution, but not destroying it.

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The Drama in Adult Education.

Report on Public Libraries in England and Wales.

Report of Royal Commission on National Museums and Galleries (1928-1930).

See also:

Report on Public Museums in the British Isles (Other than the National Museums), by H. A. Miers.

Report on American Museum Work, by E. E. Lowe.

Publications of the Library Association and the School Library Association (especially the lists of books suitable for young people of different ages).

Publications of the British Film Institute.

CHAPTER V

SCHOOLS

School and life FROM those institutions which, in a modern civilized state, do as a matter of fact exert powerful educational influences, whether or not they were meant to do so, we pass to the consideration of institutions which have been established and are maintained for the express purpose of educating people, and especially young people. Schools, and what goes on in them, are the main theme of this book, though, as has been implied in the preceding chapter, schools cannot be fruitfully discussed unless they are placed in their social setting, and unless school teachers regard themselves as working with or against other influences which concurrently affect the pupil for good or ill. The school should be a bit of life, or rather, perhaps, it should be, in its effects upon the pupil's intellect and character, in some sort a miniature of the best elements in the great society outside. And the teacher, if he (or she) is to escape being justly condemned as a pedant, must be in the best sense of the term a man (or a woman) of the world. The time has gone by when the sole object of the school was "putting a child to his book," and when the sole business of a teacher was the communication of knowledge. It is impracticable to scrap the word "teacher," and any attempt to substitute the word "educator" in common speech would inevitably fail, if only because such an attempt would savour of priggishness. But we must fully recognize that the connotation of the word "teacher" has undergone a great change as the result of modern educational thought and practice.

School and leisure Many people's recollections of their school days would cause them to think of school as, on the whole, a place for serious work—of work so serious that various spurs to industry, such as praise and blame, reward and punishment, had to be employed by the teacher. And yet, by a curious twist of linguistic fortune, the word "school" comes to us from a Greek word which meant "leisure." The paradox is partly explained by the fact that among the Greeks the idea of organized education began at the top, at the stage which we should call the university. "The discussion forums or talking shops . . . where the gilded youth of Athens spent their leisure time in sports and exercises in training for war gradually crystallized into schools of philosophy and the higher arts. Their origin is described by Milton with his usual felicity when he asks Melancholy to bring with her 'retired Leisure that in trim gardens takes his pleasure.' In the leisure spent in the trim gardens of the Academy, schools developed."¹ From the notion of leisure or spare time, it was an easy transition to the notion of the learned discussion, or disputation, in which leisure was employed, and thence to the notion of the place in which the discussion or disputation or lecture was held. Hence the later use of the term "school." In modern times the school, so far from being a place of "retired leisure," came to be thought of as a place of hard discipline akin to a prison, and the schoolmaster came to be thought of as one of the severest of taskmasters. In our own times, the school has shared the general tendency towards the more humane treatment of the young and helpless. But our examination system, and the competition for scholarships and prizes, have to a great extent excluded the notion of unhurried inquiry and natural intellectual development. Only here and there in our educational system have we broken down the sharp distinction between work and leisure, and realized that the best

¹ A. F. Leach, Art. "School" in Monroe's *Cyclopaedia of Education*.

results are achieved by recapturing the spirit, though not the letter, of the old Greek conception.

The "elementary school" The general history of schools has not yet been written, for the sufficient reason that the materials do not yet exist for compiling such a history. Much valuable work has been done, however, towards making possible the history of national systems of schools; for example, the schools of England.¹ For our present purpose, there is no need to go back further than the beginning of the nineteenth century, when England could hardly boast of her "nine large schools which were still sleeping, and a number of smaller ones which were well-nigh dead," besides, for the benefit of what were then usually described as "the lower orders," a few charity schools and many dame schools. Nothing less than a revolution has taken place since then. We in England are as yet very far from ignoring social grades in our educational arrangements, and we still tend to think of certain types of schools as being for the children of the comparatively well-to-do, and of others for the children of those who can afford nothing better. Slowly, however, we are coming to think of the education of the nation as a single problem, and to emphasize distinctions which are based upon the facts of growth, and are more fundamental than those which are based upon social position. All the way through the nineteenth century, there developed the idea of an "elementary school," a school in which the children of "the masses" might be taught the "elements" or rudiments of knowledge, or, in plainer phrase, the three r's. In the last third of the century, people began to get accustomed to the idea and the practice of compulsory attendance at the elementary school, and the period of such attendance was gradually extended, until, in the burst of enthusiasm for reconstruction that marked the closing stages

¹ E.g. by A. F. Leach, Foster Watson, J. E. G. de Montmorency, R. L. Archer, J. W. Adamson, F. Smith, and others.

of the first great war, it was enacted that no child might leave the elementary school until the end of the term in which his fourteenth birthday occurred.

But long before that enactment, it had become clear that the term "elementary school" had become a misnomer. The elementary school had gone beyond its original function of providing the elements or rudiments of book knowledge. If we take reading, writing and arithmetic as constituting those elements, or as the tools without which further advance is in some respects impossible, then the really elementary stage of education ends, not at the age of fourteen, but before the age of twelve. For many years, therefore, the children in the senior classes of the elementary school were being given a kind of instruction which could not be correctly described as elementary, but which was never really thought out in connection with the child's growing needs, and which tended to degenerate into a process of marking time, until the eagerly awaited fourteenth birthday should dawn. It became clear in fact that with the latest extension of the school age, including the abolition of half-time attendance in certain areas, the elementary school had become an anachronism, and that with the prospect of compulsory attendance being required beyond the fourteenth year, a scheme of reorganization was necessary, which would provide suitably for all children over eleven years of age, which would cause the children to enjoy their school life, and would cause parents, employers, and the general tax-paying public to regard the extension of full-time education as well worth the sacrifices involved.

Primary and post-primary schools The fundamental idea upon which schemes of school reorganization rest is that between the ages of eleven and twelve the normal child has reached a well-defined stage in his educational progress. Differences of opinion on this point usually arise out of incautious ways of stating the case. There is nothing

magical nor essentially epochal about the age of eleven. In temperate climates the child is still at the pre-adolescent stage. The relevant fact, so far as school organization is concerned, is that at the age of eleven he should have learnt to read matter within his comprehension, to write simple English, to spell such words as he can intelligently use, to perform the common operations of arithmetic, and be, generally speaking, ready for a new start in his school career. Experience has shown, moreover, that if this new start is to be made in a new and unaccustomed environment, the change had better take place before the age of twelve than after.¹ At this age, which may conveniently be called 11+, there comes to an end what may properly be called the child's elementary education. And since the term "elementary education" has for a long time been used to mean something different from this, it is better to drop the term altogether, and to think of the age 11-12 years as dividing the primary from the post-primary period of education. The use of the term "primary" has the advantage that it is the proper correlate of "secondary," whereas "elementary" is the proper correlate of "advanced."

There are three ways of conceiving the relation between the primary and the post-primary period in a national scheme of education, and all these ways have in fact been practised. The American tradition has been to make the relation a continuous one, the years 6-14 being spent in the common school, and the years 14-18 in the high school. In Germany, before the first world war there was, as became a country in which the caste spirit was extremely strong, practically no connection between the two; a child who entered the people's school at 6 remained there until he was 14, and the child whose parents could afford a secondary education entered a secondary school at the age of 9, remaining there from six to nine years. There was no open

¹ No reference is here made to the cataclysmic change from the home environment to that of a boarding-school.

corridor between the primary and the secondary school.¹ In England, when secondary education as defined by the Act of 1902 became accepted as a national responsibility, a middle way was followed, by which a child who had attended an elementary school might be drafted into a secondary school, with suitable financial assistance, at or about the age of eleven. This plan, as we have seen, is most in accord with the child's growing needs. In the United States of America, the tradition referred to above has been broken by the rise of the junior high school. Instead of eight years being spent in the elementary school, followed by four in the high school, the newer organization diminishes the elementary-school course to six years, followed by three in the junior high school, and three in the high school proper. Otherwise expressed, the formula 8-4 has been changed to 6-3-3, and the tendency seems to be to change it to 4-4-4.

The principle exemplified in these cases is that, where the state undertakes to establish a school system on a nationwide scale, the division between the primary and the post-primary parts of the system is made round about the age of eleven years. There is no more instructive or interesting phase of the comparative study of education in different countries than the organization of their state-maintained schools. But we must now pass on to indicate the present trend of opinion and practice in England, making sundry comparisons with other countries as we proceed. The English tendency in education, as in other matters, has been to let things "slowly broaden down, from precedent to precedent," trusting to voluntary enterprise here, or to isolated local action there, until at length the desirability of a definite reorganization on a national scale became apparent to most citizens of average intelligence. This process, which is sometimes derided as

¹ The barrier between the Prussian elementary and higher schools could hardly be passed after the age of 10, though it was passed occasionally by exceptional men like Virchow and Paulsen.

"muddling through," had at any rate the advantage that few houses of cards were set up only to be knocked down. The school system grew up, without much thought of an ideal organization towards which all changes should tend, but with each part of the system fairly sound within itself, and capable of readjustment,¹ until at last experience had shown clearly what the relations of the parts ought to be. With these considerations in mind, let us pass in review the parts of our national system of education as they now exist or seem to be emerging.

Nursery schools To begin at the beginning, not of a child's life, but of his possible attendance at a place called a school, let us take the case of nursery schools, for children between two and five years of age. In recent years something like a revolution has taken place in informed opinion about this period of life. The psycho-analysts have laid a new emphasis upon infancy, but with so much speculation and probable misinterpretation that we will not deal with their views here. More to our immediate purpose are the results of other lines of inquiry. It is now known that practically all the mentally defective, three-quarters of the deaf, one-third of the crippled, a considerable proportion of those with defective eye sight, and three-quarters of all cases of defective speech, are recognizable before the sixth year is reached. The basic lines of both physical and mental organization are laid down in the first five years—the pre-school² years as they are often called. In these early years retardation and precocity both tend to reveal themselves. The brain grows at a rapid rate, and the mind with it. A Victorian scholar once remarked to a col-

¹ Except when religious difficulties stand in the way, as in the case of "dual control" by church and state.

² The term "pre-school," used much in America, is convenient notwithstanding that it seems to ignore the nursery school. In general, it refers to the child who is under the age when attendance at school becomes compulsory.

league to whom a child had been born—"young as he is, he will learn more than you in the next few years." This statement is no longer mere opinion. "Never again," says a modern investigator, "will the child's mind, character, and spirit advance as in this formative period of growth."¹ These are examples of the facts to be recalled if ever our financiers and legislators, casting about for measures of economy, again propose to exclude the "under-fives" from educational care. For various reasons, economic and otherwise, opinion in this country has wobbled curiously from time to time,² but facts too stubborn to be resisted have silenced intelligent objectors to nursery schools. The chief point that remains to be decided is whether they shall be provided for all who want them, or only for the children of the most needy.

Infant schools Ever since 1870, attendance at school, except when a child is educated privately, has been compulsory in England for children from the age of five, in which respect she has differed from most other countries, the usual age being six. But provision has also been made for children from three to five years of age, if the parents so desired, and it has been with regard to these children that the uncertainty of policy noted above has existed. The English infant school, for children between four or five and seven years of age, has a history all its own. Had it developed on the lines laid down early in the nineteenth century by Robert Owen, the Welsh anticipator of Froebel's kindergarten, that history would have been very different. Unfortunately, its development owed more to the ardent but largely misguided Samuel Wilderspin, whose influence was, however, tempered by that of David Stow of Glasgow, and of Charles and Elizabeth Mayo, the English Pestalozzians. The combined result at its best consisted very largely in gilding the pedagogic pill com-

¹ A Gesell, *The Pre-School Child*, p. 11.

² See P. B. Ballard, *The Changing School*, ch. xx.

pounded of the abstractions of language and number; in other words it consisted of elementary instruction in the three r's. By a happy chance the infant schools escaped the blighting influence of "payment by results," not, however, without an attempt by Robert Lowe to include the infants in his scheme. Thus for some decades infant-school teachers enjoyed a degree of freedom that was denied to teachers of older children. The way was open for a happier influence from outside, and that influence came in the 1870's from the kindergarten movement, which had for twenty years, thanks to the efforts of a band of devoted Froebelians, been gathering strength in private schools for the children of the well-to-do. It is a well-known fact that for many years the infant schools were the most progressive and enlightened part of the English elementary-school system, and this was mostly due to Froebelian influences in the latter part of the nineteenth century. More recently, the Montessori movement affected the infant schools, by emphasizing individual work, and by pointing out new ways of dealing with large classes, so that the individual child is not lost in the crowd.

Junior schools As a matter of terminology, it is convenient to speak of primary education as covering the nursery school (2-5), the infant school (5-7) and the junior school (7-11 or thereabouts). In the first chapter some general remarks were made about the child's physical and mental development at the junior period but it is a period which has been little investigated by child psychologists, as compared with the periods of infancy and adolescence. This omission is being repaired, now that the junior school, as here defined, is becoming established as a well-marked stage of school organization both in Britain and in America. Of the great importance of the junior school no shadow of doubt can remain in the mind of anyone who has carefully considered its function, which is that of laying those foundations of knowledge and skill in a general

curriculum, upon which the special curricula of the various post-primary schools have to be built. In other words, the chief characteristic of the junior stage of instruction is that the notion of specialization is foreign to its aims.

Post-primary schools The nursery, infant and junior schools cover the field of primary education. The verbal correlate of "primary" is "secondary," a word which may mean next in importance or simply next in order of time. The latter is the sense in which the word is used in the Education Act of 1944. By that Act the term "secondary," hitherto in England attached to one type of school, is transferred to the whole of the stage of education that follows the primary stage. Instead of only half a million pupils in grant-aided "secondary" schools, all children from the age of 11+ are to receive a secondary education. "The figure of some half-million pupils in 'secondary' schools must be replaced in our thinking by some two and a half to three million pupils receiving secondary education"¹ of one type or another. To this wider use of the term "secondary" we are now getting accustomed. It has been objected that no Act of Parliament could alter the existing senior schools by the mere device of calling them secondary. The truth is, however, that the Act sets up an ideal school system, towards the realization of which it will be the duty of local authorities, administrators and teachers to bend their energies for many years to come. We are calling many of the schools a new name. To make them worthy of that name must be a long hard job, having regard to the inadequate teaching staff, equipment, amenities and buildings with which we started. Secondary education, as it exists to-day, is varied, but there are three main types, bearing the names grammar, technical and modern. Let us consider each of them in turn.

¹ *The Nation's Schools*, p. 15. (Pamphlet No. 1, issued by the Ministry of Education.)

Secondary (grammar) Education But why "grammar," the younger readers of this book may ask. The answer is that our county and municipal secondary schools, set going by the Act of 1902, took the place of the old grammar schools which had existed in preceding centuries,¹ and that instead of finding a new name for this type of secondary education we are reverting to the old name. It is natural to do so, because these twentieth-century schools began by adopting the traditions of the old grammar schools, with a curriculum directed to entry upon a college course, or to a course preparing for one of the recognized "professions," or to preparation for the more responsible positions in the business world. Their main object, that of helping to meet the country's need for men and women of learning, the foundations of which must be laid at school, they have achieved with great success. In another sense they have been far too successful. In the absence of any other recognized secondary schools, they have been crowded with pupils whose needs were not met by their curriculum. In the thirty years following 1913 the number of pupils was nearly trebled, the influx no doubt containing some children for whom the schools were never meant.

Secondary (technical) education One of the means of establishing a better-balanced system of secondary education is the development of technical schools. Here a word of caution must at once be said. We have seen reason to distrust any sharp opposition between liberal and vocational education,² and we have implied that a grammar-school education, even with "the grand old fortifying classical curriculum," is really vocational as well as liberal. We have now, not merely to point out, but to insist, that secondary technical education must be liberal as well as vocational. It is not going to be easy to persuade parents that a technical school is as

¹ See Foster Watson's *The Old Grammar Schools* (1916) for a handy account of them.

² See above, pp. 36-9.

respectable as a grammar school, but the thing must be done. One of the tasks created by the Education Act of 1944 is that of developing practical types of secondary education such as that described by the Spens Committee as "a liberal education with science and its applications as the core and inspiration." The technical and trade schools, commercial schools, and junior art departments, small in number and restricted in aims, were all we had to begin with. There is indeed a long distance to travel.

Secondary (modern) education There is a still longer distance to travel before the intention as to secondary (modern) education can be realized. The term "modern" was suggested by the "Hadow" Report on the Education of the Adolescent (1926) to differentiate from the grammar schools, those schools which gave at least a four-year course from the age of 11+, "with a 'realistic' or practical trend in the last two years." Towards the accomplishment of the intention of the Act of 1944, that the secondary (modern) school shall provide the secondary education of the majority of the nation's children, it is not too much to say that a great deal still remains to be done. But many schools, some in new and others in old buildings, are doing excellent work, and some of their pupils are voluntarily staying on at school to the age of 16. These schools are pointing the way to the secondary (modern) schools of Mr. R. A. Butler's dreams—with a higher leaving age, smaller classes, and general accommodation in no way inferior to that of the present grammar schools. These secondary schools provide, among other things, a wide range of craft work, and they pay special attention to the vocational (including home-making) aspects of education.

Combination of types The author of this book resided in a thinly populated area when the local authority issued its provisional plan of educational reconstruction. A first cursory glance at the document revealed

the frequency of the letters G.M.T., indicating that all three types of secondary education were to be combined in single institutions conveniently situated. This is one example of a kind of organization which is now being tried experimentally elsewhere.

The utmost measure of combination of types is that which is known as the multilateral or comprehensive school. These schools provide in one institution in a given area a variety of types of secondary education. Strong arguments are being pressed for and against this radical experiment; in one form or another, it is already being tried in a number of areas.

Social distinctions The above remarks lead naturally to a frank recognition of the contrast which exists between the older civilization of England and the younger one of America. The classification of schools described in the preceding paragraphs is based upon the assumption that "all children of all the people" attend the schools provided or maintained by the state. This is approximately, but not completely, true of America. But what first strikes an American student of English education is that the most famous schools are not for the children of "the people." On further inquiry he finds that the English parent of the upper and upper-middle classes, including the professional classes, does not send his children to the state schools; and that many middle-class parents of quite modest means not only pay (more or less cheerfully) rates and taxes for the education of other people's children, but also pay what amounts to a voluntary tax, in the form of considerable school fees, for the education of their own. He finds, in fact, that, side by side with the publicly maintained schools for "the masses", which since 1944 have all been free, there is a complete system of schools for "the classes." A boy born into a well-to-do household may first be sent to a more or less expensive kindergarten in a girls' private school or high school. He may continue in the same until he is ready, perhaps

about the age of eight or nine, for a "preparatory" school, which may be very expensive, and cannot be efficient unless it is fairly expensive. At this school he remains until the age of thirteen or fourteen, and its main business, indeed, its *raison d'être*, is to prepare him for a "public" school, so named to the confusion of our American inquirer, for it is obviously not public in the proper sense of the term. On the girls' side the nearest approach to the boys' public schools are the girls' high schools, but the former are mostly boarding, and the latter mostly day, schools.¹

The "public schools" of England The English public schools strike their roots into a very remote past. At one time they seemed doomed to extinction, but new life was breathed into them by some great schoolmasters of the nineteenth century, and they now flourish more than ever. Even allowing for some looseness in the use of the term, the list of "public schools" has lengthened in recent years, by the addition of new boarding schools, attended by boys or girls whose general upbringing at home has been similar. The "public" boarding school is a peculiarly English institution, although it is to be noted that many parents in the western states of America send their children "east" to "preparatory" boarding schools, rather than to the local high school, the term "preparatory" in this case being broadly equivalent to the English term "public." In so far as social exclusiveness is at the root of this custom, it is seen in America, as well as in England, though not on so extensive a scale.

Boarding and day schools The relative merits of day and boarding schools is a problem of which there is no general solution. The boarding school, which takes charge of a child during at least three-quarters of the year, is often a

¹ For a historical view of class distinctions in English education, see R. L. Archer, *Secondary Education in the 19th Century*, pp 178-83

necessary institution, when, for example, both parents are dead, or when both reside abroad, or when the character of the home makes the decent upbringing of children impossible. The controversial issue is really confined to the question how far the boarding school is justifiable, when there is nothing to prevent the boy or girl from living with the parents and attending a good day school. In some families the question may be regarded as absolutely settled by the tradition of many generations; in others it is settled by what is more appropriately called fashion. A popular novelist describes an occasion on which an Oxford freshman was asked in a company of public-school undergraduates what school he came from. His reply, that he came from a certain great day school, was received in pained silence, as if he had said he was illegitimate. Such are the forces of tradition and fashion in the families of the well-to-do; forces about which it is futile to argue. An ardent democrat, or rather leveller, which is not quite the same thing, resents the resultant maintenance of a caste. A person of more moderate views might approve of a system which lends variety to our modes of education, and which at its best tends to the conservation of a certain high type of manners and of character. A more fundamental problem is the effect of the boarding school upon the home, for the boarding school does mean the temporary break-up of home life. It may be held to rob the parents of an important part of their own education as adults, and of the opportunity of ever really knowing their children as they might have known them. It may also have a curious and permanent effect upon a person's view of the other sex. This effect is seen at its height when a boy without sisters attends a boys' boarding school, and proceeds to a college for men only. A person who has reached manhood's estate with very little knowledge of any girl or woman except his mother has missed an essential item of a really well-rounded education.

Youth service and county colleges The outbreak of a terrible war in the autumn of 1939 forced attention to the glaring lack of provision for education after the age of 14.

A National Youth Committee, afterwards replaced by the Youth Advisory Council, was appointed, and began to operate at once. Though the youth service began as a "first-aid" remedy, it was soon placed on a permanent basis, local authorities being requested to form youth committees designed to bring together the various agencies concerned with the welfare of young people. The response has been gratifying. The promotion of facilities to enable both young persons and adults to use their leisure to advantage in a wide variety of activities covered by the term "social and physical training" is now recognized as part of the education service taken in the most general sense.

But what of the continued school education of pupils under 18 whose school life has ended? The part-time continuation schools which were envisaged by the Act of 1918, but which came to grief, are one day to be replaced, not by schools, but by colleges, and it is intended that the change of name shall correspond with a change of spirit. At first they were to be called young people's colleges, but the still more dignified expression, county colleges, was substituted. These colleges are to provide compulsory part-time education up to the age of eighteen for young people who have left school.

Universities The terms "primary" and "secondary" as applied to the pre-adolescent and the adolescent stages of education suggest the inclusive term "tertiary" for the adult stage, but the term is not much used, because of the extremely varied provision, and the serious lack of definite provision, for this stage. First come the universities, represented in England by the two senior or older universities, and by more than a dozen younger ones. Oxford and Cambridge, like some of the Continental universities, have many centuries of history

behind them. In their medieval stage they were practically training colleges for the church, law, and medicine. They were founded before the great public schools, and, in fact, were schools, since boys of fourteen were often admitted as students. The aristocracy had not yet made up their minds that education, except in the usual pursuits of a "gentleman," was worth while. At Oxford and Cambridge the sons of the middle class were numerous, and the sons of labouring folk were by no means rare. After the Revival of Learning and the Reformation, the idea gained ground that every well-to-do person ought to be educated, though women were supposed to need less education than men. A "liberal" education, which had little or nothing to do with vocation, another form of the education of a "gentleman," an education in which the classical languages predominated, was the kind of education chiefly given at Oxford and Cambridge in the 17th, 18th, and 19th centuries. When, however, the land-owning classes became the most numerous type, the poor student became a tolerated addition, or servitor. The wealthy students brought their social habits with them, habits which were not consistent with serious study. Intellectual decadence set in, and not until past the middle of the nineteenth century were reforms initiated. In the twentieth century, the two older English universities are reverting to a position more like that of medieval times. They are again to a considerable extent training schools – for persons intending to become clergymen, doctors, lawyers, teachers, civil servants, engineers, scientists, technologists, and business men.

Before the period of reform at the older universities began, London and Durham had led the way in the creation of the younger ones, and in the second half of the century this movement spread rapidly, especially in the great cities, where university colleges were established. These colleges were at first mothered by the University of London, which examined their students and granted degrees, but one by one they have become independent universities.

The highest type of institutional education has thus made gratifying headway in Britain. It is worth while noting, however, that, statistically at least, America leaves her far behind. In England and Wales, about one person in a thousand is a university student; in the United States, about one in two hundred. California, with a smaller population than Scotland, has more than three times as many university students. Iowa with the same population as the south-western counties of England, has ten times as many university students. Making all allowance for differences of standards, these are striking facts. The traveller in the far west finds university graduates, not only in the professional classes, but also among tradesmen and cowboys. The average standard of attainment is not, it cannot be, as high as in the more selective universities of Western Europe. But only a genuine passion for education can account entirely for so high a proportion of the population being willing to devote the necessary time, and to make the necessary sacrifices, in order to secure it.

Adult schools and classes No review of existing educational institutions would be complete without a definite reference to adult education. The principle underlying it is that education is not a process that ends at school or even at college, but goes on throughout adult life. It no longer means supplying the defects of early education. No matter how good that early education might have been, adult education is still necessary, the only alternative being mental stagnation. This broad statement is not, of course, true in the same sense of all people. A member of one of the learned professions may be continuously educated by the intelligent practice of his calling—a statement which could not be made about a factory “hand.” Yet even a doctor or a lawyer may take delight in continuing his education by means of music or literature, so that there are no real exceptions. In some departments of educational activity Englishmen have little cause for pride in

their past, but in cherishing the ideal of lifelong education they need not shrink from comparison with any other nation. In the first half of the nineteenth century, the lecture courses and libraries of the old mechanics' institutes, and the publications of the Society for the Diffusion of Useful Knowledge, popularized the scientific achievements of the time; and the Chartist and co-operative movements, with still broader aims, envisaged an education which should make men fit for their rising political power. That the Chartists should have "put forward an educational programme as advanced as any that have since been realized, is a comment upon the superficial, though common, complaint that English people do not care for education."¹ In the second half of the century, the foundation of colleges for working people, notably the London Working Men's College, and the residential colleges of the Society of Friends, the university extension movement of the 1870's, and the foundation in 1893 of the Workers' Educational Association, with its guiding policy of freedom, variety, and respect for individuality in all adult education, created a fair prospect for the opening of the twentieth century.

¹ *Adult Education Committee's Final Report* (1919), p. 21.

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See also: *Primary Education* (H.M.S.O.); *15 to 18* (H.M.S.O.); *A Guide to the Educational System of England and Wales* (H.M.S.O.); W. O. Lester Smith, *Education in Great Britain*; G. A. N. Lowndes, *The British Educational System*.

CHAPTER VI

SCHOOL CURRICULA

(I. Principles)

The problem stated WHAT we teach and why we teach it is a two-fold question to be discussed in this chapter.

The first part of the question is answered easily enough. The second part is not only not answered, but is rarely even asked, except by the student of educational principles, whose business it is to pursue relentlessly the question—why? and whose business it is therefore not to remain satisfied with the reply that we teach certain things because we were taught those things in our own youth, or because our pupils have to pass an examination. To be so satisfied is not a relentless pursuit of the question—why? And it is to be noted that the inquiry why we teach certain “subjects,” as we call them, is not a matter of mere speculative curiosity. On the contrary, the result of such an inquiry is bound to have practical bearings of possibly great importance. Most people have their views about what should be taught in school. Some would lay the emphasis on what they describe as the severely practical, others on what will serve the ends of well-spent leisure, whilst the doctrine of others is not unfairly satirized by Mr. Dooley’s remark that it makes no difference what you teach a boy, so long as he doesn’t like it. In a miscellaneous assemblage, even of intelligent men and women, it might easily happen that no two persons are in agreement on this matter. So far as the elementary schools were concerned, the state used to solve the difficulty by the simple method of prescribing in detail what should be taught. The state no longer does so, and few people have greater

freedom than the English elementary-school teacher enjoyed after the closing years of the nineteenth century. If freedom is to be wisely used, it is essential that the principles underlying the structure of the curriculum should be carefully studied.

Use of terms First, however, a few words as to the use of terms. The word "curriculum" is a Latin word signifying a racecourse; and unfortunately, owing to our modern system of examinations, the metaphor is often more apt than it was ever meant to be. From the meaning "racecourse" it is an easy transition to a course of study, the modern meaning of the term. Though "curriculum" is the leading term of the present chapter, we may take this opportunity of commenting upon a few other terms. The proper correlative of "education" is "educator"; the former we use freely, but the latter rarely, and the attempt to naturalize the word "educand" has not met with much success. So it seems that we must get on as well as we can with the terms "education," "teacher," and "child," or "pupil," or "student," as best befits the occasion. As education is not yet generally regarded as a science, but rather as the hope of a science, we have to choose between this somewhat untidy terminology, and the appearance of pedantry, and we here take the first of these two risks. The worst of doing so is that we seem to be identifying teaching with education. On the face of it, the teacher does seem to be the biggest factor in education; and teaching, aiming directly as it does at the pupil's intellectual advancement, seems to be the major part of a teacher's job. As, however, the teacher unquestionably does much more than teach, in this restricted sense, we ought to recognize the fact in our terminology. The distinction made by some writers¹ between instruction and training has its advantages. School education, or teaching in the wider sense,

¹ I.e. the writers of the Herbartian school, who were much in evidence in America and in England during the twenty years following 1890.

may, according to these writers, be analysed as (1) instruction, or teaching in the narrower sense, and (2) training, which latter rests upon (a) the exercise of authority in government, and (b) the exercise of personal influence. For the present, we are concerned with instruction, or teaching in the narrower sense, and first of all with the problems of the curriculum.

A glance backwards: Anyone who visits a school at the present day, and scrutinizes the timetable, the text-books, and the syllabuses of instruction, is faced by a set of facts which cannot be explained except by reference to the conditions out of which they arose. Take first the typical case of the English primary schools. In the 1830's and 1840's, to go no further back, a child brought up in an English village, without ever seeing the inside, and possibly without ever seeing the outside, of a school, might yet be so brought up as to excite the envy of some of our modern prophets of "practical" education. He might acquire a very practical knowledge of the hills and streams, the fauna and flora, of his neighbourhood, and of much that pertains to the life of farm and cottage, and, in due course, he might master a skilled craft.¹ In many vital respects it would be absurd, according to our most modern notions, to call him, without further ado, an ignorant uneducated person. The trouble was that his vision was limited to his own parish, and that his knowledge of mankind was limited to the few-score souls among whom he actually lived. To escape these limitations, to become conscious of citizenship, and to be fit to exercise the political power at which they were aiming, the "lower orders," said the philanthropists of the time, must learn those extended means of communication which we call reading

¹ Wm. Cobbett tells of an admirable woman who could neither read nor write but who "understood well the making of bread, the brewing of beer, the keeping of cows, the rearing of pigs, the salting of meat, the rearing of poultry, the obtaining of honey, the making of rushes to serve instead of candles . . ." and so on.

and writing. A new motive was thus added to the older one that every child ought to be able to read the Bible. For one reason or another, these early schools were places in which children were taught to read and write, and to do simple sums if the teacher himself happened to know how to do them.

Now reading and writing are not ends in themselves, any more than talking is an end in itself. They are merely means to an end. But the elementary-school tradition, owing to its origin, unfortunately gave them a dominant position. It is true that other "subjects" were taught. An inspector of schools, reporting in the year 1856, gave an account, by no means unpleasing in some of its features, of what might be expected in an English elementary school of a "fair" degree of merit. "In the first class," said he, "the children will be able to read a page of natural history—about an elephant, a cotton tree, or a crocodile—with tolerable fluency and with scarcely a mistake. They would answer collateral questions on this, not well, but not preposterously ill; they would have a general knowledge of the distribution and conventional divisions of land and water on the surface of the globe; most of them would name the counties on an unlettered map of England, and the kingdoms on one of Europe. They would work a sum in compound addition—two-thirds of them without a mistake; they would write a short account of any object named to them which they had seen or read about—an animal, a tree, a flower—intelligently, and not without thought and observation, but with trifling errors of grammar and spelling."

The above is a pretty enough picture of a school in the late 1850's, and the inspector reported that 80 per cent of his schools might be so described. The point to which we here direct attention is that reading and writing dominated the situation. Other "subjects," geography, or history, or composition, or even nature-study, were regarded as mere applications of, or fields for practice in, these almighty arts of reading and writing. A few years later (in 1862) Robert Lowe, of unhappy

memory, put into operation the rule of "payment by results," the results paid for being passes at an annual examination in the "three r's." The tyranny of reading and writing and figuring was now complete. Education was officially identified with poring over books and papers; at least that was thought the only education worth paying for, and naturally it soon became the only education that seemed worth giving. Geography and nature-study, even the sort derived from books, were soon abandoned. The three r's assumed the position of ends, instead of means to an end. As one of the older inspectors said, the children were trained like pointers, to bark at print.

Later on, when these effects were apparent to the most obtuse of officials, the teaching of certain specified subjects besides the three r's became recognized and paid for. There was a gradual return to a fuller programme, always, however, in strict connection with the payment of so much grant for so much attempted by way of teaching, and tested by way of examination; and always, it may be added, in strict connection with the printed page. The evidence of a person who was a child in a passably good elementary school in the 1870's is instructive. He could trace satisfactorily, with accompanying sketch-maps, the courses of the Ganges and the Mississippi, but not of the beautiful little river that flowed past the school. He read about the incursions of the Danes, the Elizabethan sea-dogs, and the career and the end of Charles I, but he was never even told that the Danes destroyed the abbey of which ruins still remained near the school, that Drake was born only a mile away, and that one of the famous Five Members was member for the ancient borough in which he lived. The school "readers" supplied him with information about palms and crocodiles, but he was not taught even the names of the trees and shrubs that grew in the school grounds. He could perform paper calculations involving apothecaries' weight, or wine measure, with no emotion save joy at getting the right answer, or fear at getting the wrong one. In short, his schooling

deprived him of contact with realities, and offered him instead the abstractions of the text-books. And he was trained to believe what was very far indeed from the truth, that all real knowledge was in the books.¹

Later still, before the opening of the twentieth century, the system of grants was completely altered, a general outline of a curriculum was substituted for the old prescription in detail, the foolish notion was abandoned that the same curriculum will serve for every type of school, the annual examination was abolished, and teachers were left relatively free to make their own syllabuses and to devise their own methods. Later still, the central authority withdrew even the general outline of a curriculum, and left it to the local authorities, their administrators, and teachers, to organize instruction as seemed best in the circumstances. The teachers were relatively free; but if anyone should suppose that the former things soon passed away and that all things straightway became new, he would be mistaken. Teachers who had made a reputation for high percentages of passes at the annual parade day could not readily adapt themselves to less spectacular criteria of success.

We have already observed that from the year 1861 until the abolition of "payment by results," the infant schools always had a far better chance of adopting new ideals and new methods than had the schools for older children. Robert Lowe's original proposals would have condemned children under seven to an annual examination in "reading a narrative in monosyllables, writing small and capital letters, and writing and naming numbers up to twenty." Even Lowe, however, was induced to relent in the case of the infants, with the happy "result" that the most intelligent and progressive teachers could open their minds to the Froebelian influences which were then quietly streaming into English educational thought, and could create a tradition of receptivity to the best that

¹ Caldwell Cook's *The Play Way* is, in effect, a protest against what he calls the "everlasting slavery to books."

was being done and said regarding the education of young children.

(2) *Secondary schools* With regard to secondary education, it is unnecessary for our purpose to extend our backward glance beyond the year 1868, when the Schools Inquiry Commission issued its report upon the endowed and private schools that lay between the nine great public schools and the elementary schools of that time. Assistant Commissioners had been sent into all parts of the country, and their reports varied considerably. Of one district it was reported: "Latin is taught to every boy, Greek to all who remain long enough in the school; arithmetic and even mathematics are looked upon as subjects of quite inferior importance; modern languages are little attended to; chemistry and physics are scarcely heard of"¹ Another said: "There were only one or two schools at which I found lessons given either in English history and literature, or in the French language, or in chemistry in such a way as to have any educational effect. As a general rule the knowledge of Latin in a grammar school is the measurement of attainment in all other subjects."² Another reported that Latin "is more often taught to keep up a show of obedience to founders' wills than for any better reason. It is so taught in the majority of cases that it comes literally to nothing. Finally it furnishes the pretext for the neglect of all other useful learning, and is the indirect means of keeping down the general level of education in almost every small town which is so unfortunate as to possess an endowment."³ He further stated that three-fourths of the boys he examined in endowed schools would not have passed the examination of elementary school children of the same age in arithmetic or any other subject. Quotations from the report might be multi-

¹ James Bryce, *Report* vol. I, p. 132.

² T. H. Green, *Report*, vol. I, p. 134.

³ J. G. Fitch, *Report*, vol. I, p. 133.

plied, but the general impression would remain unaltered. The education of girls was as bad as that of boys, but with differences. Speaking of the daughters of middle-class parents of good position one of the assistant commissioners said that "till her tenth year she is taught at home, probably with her brothers, to read, and write, and sew, to say the multiplication table, to learn the rudiments of musical notation and the first few pages of a French Grammar. . . . Then she is sent, sometimes at once, more frequently after two or three years at a day school, to a boarding school with some pretensions to selectness. Here, besides going on with French, and writing and spelling, she takes a little arithmetic, a little grammar, a little geography, a little Roman, Greek, and English History, the elements of German, the use of the globes, and drawing from the flat, and she listens once a week to a lecturer discoursing on botany, or showing chemical experiments. . . . The average boarding school girl learns so many bits of things that one drives the other out of her head." And, even if a girl is privileged to attend a "finishing school" till the age of eighteen, "the only difference is that she learns out of other text-books, and has accomplishment lessons from a new set of masters. As to thorough mental training, the formation of intellectual habits and tastes, it was not the wish of the parents to foster these, and it was seldom the object of the school. Education has not failed to create them, because it has not tried."¹

The education of a girl of what was called the lower middle class, was shorter, and turned less upon accomplishments. She went to a private day school at about ten years of age, having learnt at home little but reading and how to hold a needle. "In the school, which is a small one, she is perfected in reading, learns spelling from a book, of which she repeats half a column daily, learns geography and English grammar—both by rote, does sums out of a text-book . . . and reads in

¹ Bryce, *Report*, vol. IX, pp. 823-7.

Goldsmith's *History of England*. After two or three years, this course is extended to include chronology, geology, and mythology, with other branches of science and general information, which she learns by committing to memory the answers in Mangnall's *Questions*, or some one of the other numerous catechisms. . . . An hour or two in the afternoon is also devoted to needlework, plain and ornamental . . . and if her parents are rather more ambitious than their neighbours, she is also taught French, and takes lessons on the pianoforte. . . . I might describe a dozen such schools, in all of which it was evident that the teaching had effected nothing."¹

Effects of public examinations The report of 1868 has been quoted at some length, because it is necessary to realize the point at which the secondary-school curriculum started in the not remote past. The next comprehensive inquiry into the state of secondary education was that of the Royal Commission which reported in 1895. This body did not, however, report, except in very general terms, upon the curricula of the then existing schools. Many things had happened between 1868 and 1895. School curricula had been influenced, and to some extent standardized, by the growth of the university local examinations and other examining agencies. In the elementary schools of "higher grade," which were in effect secondary schools of a new type, a curriculum was encouraged which laid heavy stress on mathematical and physical science, and in fact reflected in the schools the conflict which raged outside between the claims of science and of the humanities. In the 1880's and 1890's, the matriculation examination of the University of London was used as a leaving examination by many schools, and provided a widely accepted formula of general education which certainly did not lack in comprehensiveness. Further, in the years that intervened between the two public inquiries, the secondary education of

¹ Bryce, *Report* vol. IX pp. 827-8

girls had been completely transformed by the admission of women to the universities, by the consequent supply of efficient women teachers, by the growth of the girls' high schools, and by the admission of girls as well as boys to the school examinations conducted by universities.

When, therefore, as the result of the great Education Act of 1902, the state at last took in hand the provision of higher as well as elementary education, the position was that the curricula of secondary schools were practically settled by a variety of examining authorities, university and professional. The state had been a long time making up its mind about assuming responsibility for secondary education, but the delay had the advantage that secondary schools escaped "payment by results," the battle against which had been fought and won. The Board of Education never attached rigid conditions to the payment of grant. So far as the Board was concerned, the state-aided secondary schools were given from the first what the elementary schools had struggled during several decades to secure—freedom to work out their curricula within certain broadly defined limits. The Board merely laid it down that a secondary school was to provide instruction in English, at least one language other than English, geography, history, mathematics, science, drawing, and domestic subjects for girls. Later, a choice of advanced courses was added, comprising, as time went on, science and mathematics, classics, modern studies, a combination of ancient and modern studies, geography, and other combinations of subjects. In effect, however, the curricula of secondary schools were profoundly influenced by the requirements of the school examinations, and these requirements were more rigid than the Board's.

Motives at work in development of curriculum So much for the main facts, as they have arisen out of our past. Naturally we have taken English education as our example, although in truth the subject of our inquiry has little to do with nationality. An American or a German writer on school curricula would have had a considerably different story to tell in detail. But when we proceed to reflect upon the facts, to inquire into the underlying motives which have been at work in causing changes in curricula, we enter upon a portion of the field which we may rightly call the philosophy of education, a field which knows no rigid national boundaries. Let us ask, then, what principles have been more or less consciously at work in the development of school curricula as we know them, how far those principles can be accepted as valid, and what inferences ought to be drawn for future guidance in modifying the established curricula for the several types of schools.

Utility and discipline We have seen that in the earlier elementary schools, the emphasis was thrown entirely upon the three r's. Very few people stopped to ask the reason why, but if they had asked, they would probably have answered, and answered reasonably, that these things are useful in the conduct of life. It is obviously useful to anyone, whatever his daily occupation, to be able to read or to write a letter, and to be able to add up a column of figures; and as the conduct of life includes the exercise of the duties of citizenship and the filling-up of the hours of leisure, it is useful to be able to read a newspaper or a story. Gradually, as the years of attendance at school were extended, and more time was available, the school arithmetic books became full of difficult and complicated sums—complex fractions, compound proportion, stocks and shares, train sums, clock sums, and the like—which could not by any allowable stretch of meaning be called useful; which, in fact, existed only in and for the school text-

books, and which were speedily forgotten when school days were over. If anyone complained of the uselessness of these exercises, the reply would have been, in the words of an old schoolmaster, that even if the boy should forget his arithmetic, his arithmetic would not forget him; by which he meant that the boy would have received a mental training or discipline such as would make him more efficient for any purpose whatever. Besides the claims of *utility*, then, there were put forward the claims of *discipline*. This distinction pursues us, in one form or another, right through the history of the curriculum, and also in our present-day discussions about curricula. It is the distinction between things that are taught because of their patent value either for work or for leisure, and things that are taught because of their latent value as sharpeners of wits. It is the distinction made by some writers between real or concrete studies and formal or abstract studies. Whether or not the distinction is misleading, at any rate in connection with the content of school studies, is the central problem of the theory of the curriculum.

Illustrated from the elementary curriculum A scrutiny of the English elementary school "codes" issued from about 1895 onwards would reveal a clear instance of the working of the two influences we have described. For many years grammar was systematically and almost universally taught, certainly not because of its utility, for it had little or no effect upon the children's oral or written composition, but because of the mental discipline it was supposed to afford. Object lessons were introduced, not because the knowledge gained was of much value, but because the children's "powers of observation" must be disciplined. Drawing was introduced, not in a manner to enlist the children's natural delight in the arts of expression, but in order to yield the "discipline of hand and eye" which comes of practice in drawing lines—straight and curved, horizontal and oblique, and so forth.

Manual instruction was likewise "to be regarded as a disciplinary exercise destined to train the hand and eye to accuracy, and to a due appreciation of form," whether or not the result was of any value or interest to the child. Needlework was similarly taught as practice in a variety of stitches. In all these cases the formal or disciplinary motive was predominant, and strongly influenced the teaching. Anyone who clearly remembers the period would think it safe to add that it not only influenced the teaching, but also ruined it. On the other hand, geography and history were taught because the knowledge gained was supposed to possess a value for its own sake, apart from the mental training involved in acquiring it.¹

And from the secondary In the sphere of secondary education, precisely the same causes have been at work. There was a time in the history of Europe when it was practically useful, and was indeed a necessary part of a generous education, to be able to read and write in the Latin language, because that was the language employed by men of learning. It was thus the motive of utility which first caused Latin to be taught to all boys whose schooling was extended beyond the elementary stage. In process of time the use of Latin as an ordinary means of communication came gradually to an end. But the teaching of Latin in schools, so far from coming to an end, remained as firmly entrenched as ever as part of the educational system, as we saw in our review of school curricula in the late nineteenth century. And if anyone attacked the position of Latin, and denounced the almost exclusive preoccupation of the school with a language which was rarely used later in life, the defence was precisely the elementary schoolmaster's defence of parsing and of useless sums. Even if the boy forgot his Latin, his Latin would not

¹ The whole story of the English elementary-school curriculum is told, very usefully, but with marvellous official complacency in the *Report of the Board of Education for the year 1910-11*.

forget him. The study of Latin—so ran the argument—disciplined the boy's mental powers, and those disciplined powers could then be turned on to any occupation which he happened to choose. Few people ventured to question the virtues of compulsory Latin for all and sundry. One man who had been educated at an English public school, and who afterwards achieved success as a Canadian farmer, gravely informed the writer that he attributed his success chiefly to his school Latin, which had taught him "judgment and resource." It never occurred to him that his judgment and resource were perchance attributable to his inherited mental constitution, and that they were successfully employed at one stage of his career upon Latin, and at a subsequent stage upon farming. But his easy assumption was typical of the whole defence of Latin as a universal instrument of training.

The faculty psychology and the school curriculum The view of the curriculum which regarded mental discipline as the direct aim of teaching, irrespectively of the bearing of the matter taught upon the needs of life, was supported and defended by a psychology which has long been rejected in theory, though in practice it is still considerably in evidence. We refer to the psychology which classified mental phenomena under certain "faculties"—observation, memory, imagination, judgment, reasoning, and so on. According to the corresponding pedagogy, the prime aim of teaching was to cultivate these faculties, whatever the subject-matter of instruction might be. Such a theory of teaching readily found its way from Latin to other parts of the curriculum. It worked havoc in the case of mathematics. A witness, whose studies in this kind were pursued in the late 1870's and early 1880's, can testify that in arithmetic and algebra his time was mainly occupied in "working examples" which added simply nothing to his mathematical knowledge, and were just as useful or just as

frivolous as the puzzles which constitute a feature of modern journalism. His study of geometry was the study of Euclid, which suited admirably a person with a taste for geometrical reasoning, but made very slow additions to his knowledge of geometrical truths. He was brought up in a school which quoted with conviction the opinion of the eloquent Dr. Chalmers: "I am not aware that as an expounder to the people of the lessons of the Gospel I am much the better for knowing that the three angles of a triangle are equal to two right angles, or that the square of the hypotenuse is equal to the squares of the containing sides in a right-angled triangle, but I have a strong persuasion that both the power to apprehend, and the power to convince, may be mightily strengthened, and that the habit of clear and consecutive reasoning may be firmly established, by the successive journeys which the mind is called on to perform along the pathway of geometrical demonstration. The truth is that, as a preparative, whether for the bar or for the pulpit, I have more value in mathematics for the exercise which the mind takes as it travels along the road, than for all the spoil which it gathers at the landing-place."¹

The transfer of training Now this battle between discipline and utility, or between form and content, in the selection of school studies, has, to a considerable extent, been fought and won. As a matter of accomplished fact, the curriculum of the present day, in schools of every type, is a practical acceptance of the view that we must teach that which will help our pupils to become interested spectators of, or possibly co-operators in, the great achievements of mankind—scientific, aesthetic, and practical; and that, in so doing, we must choose our *methods* so as to secure the mental discipline upon which the older pedagogues laid exclusive stress. We

¹ Quoted by R. Potts, in a late issue (1886) of his edition (originally published in 1845) of Euclid's Elements of Geometry.

say that the battle is partly won, but we must add not wholly. Many people still believe, with Dr. Chalmers, that there is a complete transfer of training from one sort of mental material to another: hence the much advertised courses for training memory, will-power, initiative, etc. And many schoolmasters (but not so many schoolmistresses) still decline to admit art and music to the sacred company of Latin and mathematics, and to place them on an equal footing in the secondary-school curriculum. Again, among educational philosophers and psychologists, the virtues of certain studies as affording an incomparable discipline of the mind, the results of which discipline are effective in whatever else the mind has subsequently to grapple with, and the value of those studies as tests of the highest kind of ability, were generally assumed until the beginning of the present century, and are sometimes assumed to this day.

The question is not whether a person who can write a good piece of Latin prose, or solve a difficult problem in geometry, has a good brain. Of course he has. The question is, or has been, whether these and similar exercises, exercises which have no obvious use in most people's daily lives, have the effect of so toughening and strengthening the mental fibre that they enable a person to approach any other kind of mental task with better prospects of success. This, in turn, raises the whole question of what is known among experimental psychologists as "the transfer of training." Does the training or discipline acquired in one branch of learning "carry over" to other branches, whether similar or dissimilar? If so, what is the extent of this transfer? Is the amount of the transfer the same to all subjects alike? And what is the psychological explanation of the transfer? Does practice in mathematical reasoning help one in political reasoning? Does practice in memorizing verse help one to remember faces? Does practice in expressing oneself in a second language help one to express oneself better in one's native language? The list of questions could obviously

be prolonged indefinitely. And these are the questions to which, especially since the opening of this century, psychologists of the experimental school have studied as the problem of the transfer of training.

The work of the experimenters As far back as 1890, William James confessed how his own faith in the transfer of of training, so far at least as memory was concerned, had been shaken by an experiment upon himself. He had found that systematic practice in learning by heart one kind of poetry did not make it easier to learn poetry of another kind; in fact, if the practice had any effect at all, the effect was detrimental. Suspecting that this negative result might be due to fatigue, he got four other persons to try similar experiments, but the gains and losses were too slight to provide any evidence that practice was followed by increased ability to learn. Ten years later two other American psychologists¹ tried a similar experiment with improved methods, using as one of their fields of experiment the mental processes involved in judging length, areas, and weights. They found that practice in estimating short lengths, small areas, and light weights, though it produced improvement within its own limits, produced slight improvement, or none at all, in estimating greater lengths, larger areas, or heavier weights. From this and kindred evidence they concluded that transfer may not take place at all, and that even when it does, improvement in one function rarely brings about equal improvement even in a closely similar function. The field of inquiry thus opened up has been worked, with highly elaborated technique, by many patient investigators who have asked what effects the memorizing of some sorts of material has upon the memorizing of other sorts, or improved neatness in arithmetic upon neatness in other things, or the learning of Latin upon the writing of English, or the study of geometry

¹ Thorndike and Woodworth, *American Psychological Review*, 1901.

upon ability to solve geometrical, quasi-geometrical, and non-geometrical problems, and so forth. The general conclusions of the experimentalists are that the "transfer effect" of training may be considerable, or slight, or non-existent; that it is considerable only when there is much in common between the material used for training and that used for testing; and that in fact little evidence can be found of a *general* training of the mind as the result of any sort of *specific* training. If, says in effect a distinguished experimenter, a psychologist from Mars, who knew nothing of our theories of mental discipline, and who simply tried to answer the question—what are the amounts of influence of sex, race, age, native ability, and studies pursued, upon the gain made during a year in power to think, or at any rate in whatever is measured by the usual intelligence tests?—he might go so far as to dismiss "studies pursued" as a factor of no importance.

The experimentalists thus claim to have proved that, though there is something in the idea of a transfer of training from one kind of mental occupation to another, there is nothing to support the old idea that a training in classics or in mathematics spreads over all one's mental activities. It is, so to speak, good for itself and for closely similar pursuits, but not for things in general, and those who point to a long list of great men who were brought up on the classics, and claim that the classics made them great, are simply ignoring the enormously more important factor of inborn capacity, which merely happened to find its opportunity in the classics because no other opportunity was offered. But the contention of the experimentalists goes further. They do not, of course, deny the fact of mental training or discipline, and they do not deny that a certain amount of transfer from one kind of mental pursuit to another may exist. But they do deny that the amount of transfer is so great as to warrant us in putting any subject into the curriculum, or in keeping it there, because of its alleged value as discipline. In other words, they assert that one of the main

principles upon which, as we have seen, curricula have traditionally been based, is entirely wrong.

Now it is no reflection upon the experimental psychologists to say that, so far as their findings affect the school curriculum, they have, to some extent, been forcing an open door. Long before the problem of the transfer of training had been systematically studied, the dogma of formal education had been attacked on more general grounds. The disappearance, for example, of large doses of English grammar as a prime ingredient of an elementary course, and of Latin grammar as an essential element in a secondary course, was an accomplished fact before the experimentalists had come into the field. They performed, as perhaps they generally do, the useful function of making clearer and surer what many people saw before. Even if their investigations had never taken place, the reform of the school curriculum would have taken place. After all, the results they claim to have achieved only signify that a certain quarrel among the psychologists, amateur and professional, as to the effects of different school studies, is, perhaps, nearer being composed. The pity of it is that the psychologists as such should ever enter upon the field of controversy about curricula. Now that one group of psychologists claims to have destroyed the arguments of other thinkers, including some other psychologists, we may realize more clearly that the curriculum is not a question for psychology at all. It is a question of relative values for the purposes of human life, and it is, therefore, a question for the philosophy rather than for the psychology of education.

Conclusion What, then, are the guiding principles which ought to determine what shall be taught in the schools? Adherents of the hard old pedagogic régime still hold that the precious deposit of mental culture, and of habits of patient industry, left behind by certain traditional studies, settle the matter. But they are a dwindling band. As far back

as 1860, George Eliot hit the nail precisely on the head in putting the case of Tom Tulliver and his tutor, Mr. Stelling. "Mr. Stelling set to work at his natural method of instilling the Eton Grammar and Euclid into the mind of Tom Tulliver. This, he considered, was the only basis of solid instruction—all other means of education were mere charlatanism, and could produce nothing better than smatterers. Tom's faculties failed him before the abstractions hideously symbolized to him in the pages of the Eton Grammar, and he was in a state bordering on idiocy with regard to the demonstration that two given triangles must be equal—though he could discern with great promptitude and certainty the fact that they *were* equal. Whence Mr. Stelling concluded that, Tom's brain being peculiarly impervious to etymology and demonstrations, was peculiarly in need of being ploughed and harrowed by these patent implements—it was his favourite metaphor, that the classics and geometry constituted that culture of the mind which prepared it for the reception of any subsequent crop. I say nothing against Mr. Stelling's theory: if we are to have one regimen for all minds, his seems to me as good as any other. I only know it turned out as uncomfortably for Tom Tulliver as if he had been plied with cheese in order to remedy a gastric weakness which prevented him from digesting it. It is astonishing what a different result one gets by changing the metaphor! Once call the brain an intellectual stomach, and one's ingenious conception of the classics and geometry as ploughs and harrow seems to settle nothing."¹

Since George Eliot wrote, much has been done towards changing the metaphor, by recognizing that what the child's mind craves for, and for that matter the adult's mind also, is appropriate intellectual nourishment. In other words, the old gospel of effort has been, not superseded, but supplemented,

¹ *The Mill on the Floss*, in the chapter on "Tom's First Half. Written in 1860, this chapter strikingly confirms and illustrates the reports of the Schools Inquiry Commission quoted above

by the new gospel of interest. Let the pupil's studies be in the line of his natural interests, and he will raise no objection to effort, because he will see for himself that a strong effort is sometimes necessary before any further advance is possible. What would otherwise have been drudgery is no longer mere drudgery, because there is meaning in it. If we make effort our primary aim in choosing the curriculum, we shall certainly end by destroying interest; but if we make keen interest our primary aim, we shall secure effort in due course, and we shall be reminded, by the way, that interest is not the same as amusement. But what are the things in which the child is interested? Like the adult, he is interested in all that helps him to live, and to live more abundantly. About the time that George Eliot was writing her novel, Herbert Spencer was writing those essays on education to which we referred in an earlier chapter. In his discussion of the curriculum he began, quite rightly, by asking what knowledge is of most worth, and went on, quite rightly, to say that that knowledge is of most worth which helps people to live completely. He then went hopelessly wrong by failing to take the child's point of view. He discussed the relative values for adult living of different kinds of knowledge, and even his discussion of that problem was not satisfactory. But he failed entirely to see that the curriculum at any stage must be contrived to help the pupil to "live completely" *at that stage*. The curriculum at each stage of development must be so contrived as to help the pupil to live as a member of the community into which he was born. Or, to come round to the mode of expression we adopted a few pages back, we reject the idea of mental discipline as the key to the problem of curricula, and we accept the idea of social utility, provided that the word "utility" is understood in the broadest sense—utility for leisure as well as for labour.

REFERENCES

The principles underlying the making of curricula may be further studied in Nunn's *Education: Its Data and First Principles*, ch. xv; the works of John Dewey, already cited; Bagley's *Educational Values*; Adams, *Herbartian Psychology* ch. v; J Ward, *Psychology applied to Education*, lect. viii.

On the transfer of training see Sandiford's *Educational Psychology*, and other works on psychology cited at the end of chapter ii. Sandiford gives copious references to the relevant experimental work.

SCHOOL CURRICULA

(II. Practice)

Subjects WHEN the word "curriculum" is mentioned, the next word that occurs to most people is the word "subjects." We think and speak of the curriculum in terms of subjects, and of the successive stages of a school education as the gradual addition of more and more subjects, until a stage of specialization is reached, when the number of subjects may be apparently, but is not really, reduced to a few, or even to one. In the past, the teacher of young children has conceived of her task as teaching them the beginnings of reading, writing, spelling, and arithmetic; and the teacher of older children has, whilst carrying these subjects further, added to the list grammar, composition, poetry, geography, history, and so on. The writer well remembers an elementary-school teacher of an older day who complained that he had twenty-two subjects to teach in a working week of twenty-five hours, and who boasted that, nevertheless, he earned the highest grant for every one of them. Manifestly, he used the word "subjects" in an arbitrary sense, probably splitting up arithmetic into oral and written arithmetic and tables, and splitting up English into several minor "subjects." The secondary-school teacher omitted some of these from his list and added, perhaps, Latin and French, chemistry and physics, as appropriate subjects at the secondary-school stage. It will be seen, however, that what happened was not so much a process of addition as a process of differentiation. At the primary stage, for example, something called elementary science was taught, which, at the secondary stage, usually became differentiated into chemistry, physics and

botany. At the university stage any one of the usual secondary school studies, such as chemistry, was further differentiated into a number of branches or subjects, each separately taught and provided for.

In a great modern university, the curriculum has become so highly differentiated, i.e. knowledge has become so specialized, that even a bare list of the definite subjects of study and examination and research would fill several pages of this book. During the school period, whether secondary or primary, we have had our list of subjects, but the list was a shorter one, although, as in the instance given above, it might be artificially lengthened. But what happens to the notion of subjects when we get down to the pre-school stage of a child's development, say to the period between two and five years? The answer to this question is extremely important, because, in principle, it affects the whole idea of the school curriculum. The fact is that unless indeed the teacher, or the system under which she works, ignores the psychology of the child, there are *no* subjects at this early stage. Or, it would be truer to say, that there is only *one* subject—the world, as yet a small one physically, in which the child lives and moves and has his being. Later on, he himself, with the slightest suggestion from the teacher, will perceive the necessity of dividing in order to conquer. He will be mentally prepared, for example, to single out the numerical relations of things, and to concentrate upon sums and tables. To force the pace by offering him the abstractions of number and language at this stage, i.e. by teaching him the “three r’s,” is unpsychological, or, what should come to the same thing, is contrary to common sense. In the first five years the child probably learns more than he will in any subsequent five years of his life, but he does not naturally learn in separate departments labelled “subjects.”

Projects What children are naturally interested in, and busy themselves about in their play, whether they be poor children playing in a street, or the fortunate occupiers of a well-appointed nursery, is not a "subject" abstracted from the actual environment, but a concrete situation, a real portion of the environment, a real bit of life as the children see it. A group of children will, of their own accord, use toys and furniture, or sticks and stones, to act out in their play some situation known to them through their observation of adults—a shop, a garden, a train, a boat, a park, or a menagerie. One can hardly resist the trite quotation that they play as if their "whole vocation were endless imitation." The good teacher in a nursery school or kindergarten understands all this, and shapes her course accordingly. The bad teacher, or the teacher who is told from above that "nothing matters but the three r's" will teach the three r's, gilding the pill by means of apparatus for word-building and number combinations. But salvation comes not by way of apparatus devised entirely by the teacher, nor by any method which means that the teacher leads the child by the nose, however gently and capably. The child's occupations, to be educative in the true sense, must have a meaning and a purpose into which he himself enters fully. Purposeful activity, arising out of the child's natural interests, is, in the sight of a good teacher, the key of the situation. Her part consists mainly in helping the children, by suggestion and guidance, in the selection of some centre of interest, some "project" that appeals to them, such as a shop, or a street, or a house, or a farm, and then helping them to work out a scheme of which they themselves are the devisers. Many of the "subjects" may be in the scheme implicitly, but the time for making them explicit will not be hurried.

Examples The meaning of the preceding paragraph will be more fully indicated by a few examples of schemes that have actually been worked out with groups of children.

In the selection of these examples, we deliberately go beyond the nursery and infant school stages, in order to show that the idea of working out a centre of interest, or project, is by no means inappropriate to a group of older children.

(i) A class of five-year-olds made a pillar-box of corrugated cardboard, covered with red paper. The children were free to post their letters to little friends, and the letters were collected and delivered at certain times during the week. The adult without insight might call this mere play. Whether one calls it play or work, it certainly enlisted the wholehearted activity of the children, who made rapid progress with their reading and writing. Their activity was wholehearted because the teacher had found a motive which appealed to them strongly. Incidentally, they learnt something of the history of the postal system.¹

(ii) The next example, though worked out by one child, is clearly capable of extension to a group. "A model of a train made by seven-year-old Charles led to the study of the railway systems of England, and great was Charles's enthusiasm when he was given a large map of England and Wales into which he was helped to mark the lines of the principal railways, while at the same time an impetus was given to the history of transport from present times back to the days when George Stephenson's 'Rocket' changed the outlook of the world, and this study was further pursued to primitive times and through the ages. The railway guide became Charles's standard textbook, and many were the hours he spent pondering times, distances and cost of the various journeys, insomuch that he assimilated many working mathematical ideas, and thus, through this absorbing interest, he could truly be said to be educating himself."²

¹ E. and M. Kenrick, *The Child from Five to Ten*, p. 66.

² *Ibid.*, p. 68

(iii) Our third example shall be from an American source. "A boy of fourteen, in a one-room school in Virginia . . . had taken seven years to reach the fourth grade.¹ He was learning nothing, the teacher insisted, and was too inert to follow his father into the cornfield. But the corn-club idea aroused him. He was given a quarter-acre on his father's farm, and told that according to the rules of the club-contest he must do all the work—he must measure, compute, keep books, select and buy his own seed and fertilizer, make frequent reports to the superintendent and to the state and national departments of agriculture. The boy came to see the relation of the school and social need, that arithmetic has social utility and was closely related to his purposes. To get information it was necessary to read; to be understood, to compose and write accurately. As a result of that contest he later graduated from an agricultural high school and finally went to the State College. That corn-club supplied a project involving half the course of study, and a motive that carried him into scientific farming."²

There is no new thing under the sun, and to this saying the thing variously called by recent writers a project, a centre of interest, or a unit of work, is no exception. We recall the story of the boy who was a complete failure at chemistry, until he wanted to fill a balloon with gas—an experiment which gave a meaning to chemistry, and supplied a motive to further study which could never have been obtained from an examination text-book. The familiar instance of producing a play, including the making of the scenery and the costumes, perhaps the study of the social life of a bygone time, insistence upon clearness of utterance, and the subtler process of literary appreciation, is a "project" in which many a school "subject" is implicitly involved, but with the difference that a dominating purpose adds gusto to the whole procedure. Again, a story is told of a

¹ Which a child normally reaches at the age of nine.

² From *Twenty-five Years of American Education*, ed. by I. L. Kandel, p. 170.

boy who carried out what amounted to a careful piece of research in order to make a map of Robinson Crusoe's island.¹

Text-books We now seem confronted by two opposed plans for working out a curriculum. The traditional plan is that of systematically teaching a number of subjects, usually on the basis of adopted text-books, which may be anything from an infants' reading primer to a literary classic, or an advanced scientific treatise. The other plan, which we have just exemplified, works, not by subjects, which are by their very nature abstractions from real life, but by concrete topics drawn from real life, and the text-books, so far as they are used at all, would be used when needed, just as a carpenter uses his tools. The point under discussion may be brought out by a brief reference to text-books. On the whole they are among the dullest of books, not excepting guide-books and railway time-tables, though they resemble the latter in suddenly acquiring an interest when a living situation arises. But dullness is not their only vice. Why is the complaint made, and justly made, that we offer children—Algebra, from which nothing follows, Geometry, from which nothing follows, Science, from which nothing follows, History, from which nothing follows,² and so on? The answer is plain to be seen in the orthodox text-book of any of these subjects, which consists of a closed system of ideas, existing snug in its own skin, unconnected with other systems because unconnected with living situations. Some years ago, for example, the proposal was made, and acted upon, that "graphs" should be introduced into the curriculum—an excellent suggestion, because the underlying idea is of very wide applicability. What actually happened was that a chapter on graphs duly appeared in the text-book of algebra, and there the graph lay as dead as

¹ See G. Thomson, *A Modern Philosophy of Education*, pp. 88–97. for this and other excellent instances.

² A. N. Whitehead, *The Aims of Education*, p. 10.

mutton, because it became one of the things to be got up and examined upon in one "subject," instead of becoming a powerful means of expression in many fields of inquiry. Some of the most recent arithmetical text-books are full of examples which exist nowhere except in text-books, and which illuminate nothing that the pupil wants to be or to do. The only purpose that can be at work in the pupil's mind is that of pleasing his teacher and passing an examination, and occasionally the more commendable purpose of solving an amusing puzzle. Similarly all but the best of recent text-books of the English language consist largely of pigeon-holed statements about parts of speech, faults of speech, figures of speech, and so on.

Long ago, Plato wrote discursive dialogues on certain themes, and Aristotle wrote formal treatises on similar themes. Plato's dialogues are informal and unsystematic, and make no pretence whatever of reaching and presenting final solutions of the problems raised, but they stir the reader to active thought, they manifest piercing insight into the heart of the matter under discussion, and they carry the intelligent reader along through sheer force of interest. Aristotle's treatises are in the nature of complete guides to those who want to know. They are coldly and stiffly systematic, and it is safe to affirm of most of them that, with the exception of professed scholars, no one ever reads them who is not compelled to do so. In short, they are text-books. To quote from a distinguished authority, "Plato's influence was immense, and less external than Aristotle's, because the form of his writings did not lend itself so well to literal acceptance as an absolute authority"; whereas Aristotle, who was "neither deep nor original," invented "well-coined formulas—verbal distinctions which are easy to handle. He set up a machine whose works, once set in motion, give the illusion of penetrating reflection and real knowledge. . . . So he, for a long time, turned science away from paths in which it might fairly soon have made decisive progress. On the other hand . . . he was a mighty encyclopaedist and a master

teacher.”¹ It is unfortunately true that Aristotle did become the master teacher, the great forerunner of the modern writer of text-books. The conception of projects, or concrete units of work, is at bottom a revolt against the tyranny of the text-book, and a partial return to the broad and leisurely spirit of inquiry which Plato’s dialogues exemplify for all time.

Limitations of the project The weekly time-table for a class of children about ten years old will differ materially according to whether the curriculum follows the traditional lines, or the lines suggested by the project method. In the former case, it will probably allow for half-hour periods of reading, writing, arithmetic, geography, history, nature-lore and drawing, with shorter periods for physical exercises and music. In the latter case, certain periods may be devoted to physical training, music and special help in the three r’s, but the remaining periods, of not less than one hour, will be devoted to such units of work as we have exemplified above, it being understood that any of these units may involve practice in the three r’s, in manual work, and in getting and using geographical, historical, literary and other material.² Until recently the first thought that would occur to an English teacher, who was more concerned than an American teacher about the conditions of entrance to a selective secondary school, was—what about the examinations? In fact, the fear of coming examinations haunted the primary system right down to the infant school.

Here we can only say that if the examination system was to be regarded as irrevocably fixed, we might as well cease to think about education at all. The main purpose of our thinking should be to reform our practice and our traditions where they need reform. Another possible objection to the project method is that it refuses to fall into a lock-step routine, and requires

¹ Léon Robin, *Greek Thought*, Eng. trans., p. 235.

² See Rugg and Shumaker, *The Child-centred School*, ch. vi.

greater effort of originality on the part of the teacher. This is true, but it can hardly be regarded as an objection, if the project method is sound in principle, and if it opens up new possibilities of interest to the thoughtful teacher. Still, it may be asked, supposing that the project method is true in principle, and applicable in practice up to a point, where is that point to be fixed? In other words, where should we begin to follow the conventional lines of the traditional division of the curriculum into separate subjects? The probable answer to this question is that after the eleventh year of the child's life he has become quite ready for free differentiation into subjects, but that the project will loom large in his curriculum up to that time, and will not be entirely abandoned afterwards.

The specialist teacher Our criticism of the conventional division of the material of the school curriculum into a multiplicity of independent subjects raises the question of the position and functions of the specialist teacher. The supreme example of specialism in teaching is, of course, the university professor, and it is for that reason that he is apt to be an unsafe counsellor regarding the school curriculum, unless he happens to have turned his exceptional talents to the study of school education as a whole. So powerful, however, has been the indirect influence of the university upon the school that it has been by no means unusual to find the whole of the teaching—say of arithmetic, or of English—in the hands of specialists, from the sixth form of a girls' high school right down to the kindergarten. This is a specialism with a vengeance and, of course, it is entirely out of keeping with the project method explained above. On the other hand, the strong tendency in the elementary school has been precisely in the opposite direction. The class, or form, system has been followed so rigidly as to exclude the possibility even of using an individual teacher's exceptional gifts, say as a musician, or an artist, or a geographer, to the advantage of the whole school.

For the causes of this grievous mistake we must look to the history of the elementary-school curriculum, and especially to the operation of payment by results. The annual examination made a rigid class system of teaching practically inevitable. If a class did well, the teacher wanted to claim the credit, and if a class did badly, the authorities wanted to fix the blame. Payment by results is dead and gone. But tradition dies hard.

Correlation So keenly did English and American teachers feel the evils of a curriculum split up into watertight compartments called "subjects" that in the 1890's many of them grasped eagerly at the idea of a "correlation of subjects"—an idea which was part and parcel of the system of pedagogic thought elaborated by the disciples of Herbart. One subject, say history, or nature-study, was to be singled out and made the core or centre round which all the other subjects were to be grouped, and with which they were to be associated. If history be made the centre, reading material may obviously be correlated with it, national songs may be sung, drawing lessons may present the development of art in the period chosen, geographical and scientific discovery may be brought in, and possibly, though here an element of artificiality appears, mathematical problems may connect themselves with some of the history material. Within the memory of people still living, one movement of reform after another has appeared, has been overworked and misinterpreted by zealous partisans, has had its day, but has not entirely ceased to be, because it has left behind it some permanent addition to the common stock of useful ideas. It was thus with the Pestalozzian object lessons, and with Froebel's "gifts," it will be thus with the Montessori and the Dalton plan, and it was certainly thus with the Herbartian scheme of correlation or concentration. Orthodox teachers laughed its ardent advocates out of court:

"To correlate is all my aim,
Link Latin on to statics,
Co-ordinate theology
With higher mathematics."

When common sense revolts, there is probably something wrong with the doctrine. The scheme succeeded best in the teaching of young children, but it overlooked the fact that the real problem is that of gradual differentiation of subjects which for the young child do not exist, not of assuming the existence of the subjects and then devising strained and artificial means of co-ordinating them. The idea of the project is true, and the correlation scheme is untrue, to the facts of mental development.

The curriculum at each stage In the preceding chapter the basic principles underlying the choice of material for the curriculum were studied, and the present chapter has so far been devoted mainly to some comments on the traditional ways of dividing up this material into "subjects" for use in the schoolroom. We have, in fact, completed the preliminaries which had to be considered before a useful discussion of the curriculum at each successive stage was possible. It would be inconsistent with the purpose of this book, and it would obviously be far beyond the competence of any one writer, to enter into the details of the curriculum for stages so far apart as (say) the infant school and the secondary school, not to speak of the college stage. On the other hand, it should be regarded as the bounden duty of every worker in and around the field of education, whether as teacher or administrator or legislator, to form as clear an idea as possible of what each kind of educational institution is aiming at, and to form some judgment as to whether it is aiming at the right things in the interests of the community as a whole. The details are the business of the specialists. The general intention is the

business of everyone who wants to take a broad philosophic view of the educational system as a whole, and maybe to view the stage with which he is particularly concerned as an organic portion of that whole. If the curriculum at all stages is to be dominated by the conception of helping the pupil to live the best kind of life at that stage, to stimulate the interests which he naturally and inevitably forms, and to guide his search for the causes of what his interests impel him to observe—how, in general, should this conception work out in practice? It will obviously be convenient to connect this part of our discussion with the stages of school life explained in a previous chapter.

The nursery school To begin at the beginning, then, we take first the nursery school. A great Victorian headmaster who once ventured to write a book on home teaching made one observation, or, rather, put a question, which deserves to be recalled, although the book is deservedly forgotten. "If," said he, "you do not begin Latin with a boy of eight, then what *are* you to do with him?" Similarly many an infant schoolmistress of a time gone by has asked, either implicitly or explicitly: "If you are not to begin the three r's with children of three or four, what *are* you to do with them?" To this question the modern nursery school provides the answer, and the answer comes mostly from Froebel and in some respects from Montessori. The children learn decent bodily habits, including the cleaning of teeth, the use of a handkerchief, the use of soap and water, and, when necessary, the use of a bath. They learn the elements of social behaviour, and anyone who has watched the table manners of children in a nursery school, and who knows how such children feed at home, must appreciate what such learning means. They learn to take care of the schoolroom, of flowers and animal pets, to prepare the tables for meals, and to wash plates and mugs, to prepare for sleep, and afterwards to fold blankets, put away beds, and put on boots or shoes. They learn to don and to doff their out-

door clothing. Very young children do not take readily to co-operative activities, but they gradually learn to work in groups, to take part in games and singing and rhythmic exercises and conversation. Throughout the whole day's proceedings there breathes the spirit of play, sometimes free, sometimes suggested or half-directed, but always the spirit of play, with an abundance of simple and inexpensive toys, such as will enable the children to reproduce in miniature the life that they know outside the school.

The infant school The child in the nursery school or kindergarten is a fairly thorough individualist. He likes to be in other children's company, but he prefers to play his own games and to pursue his own aims, without being interfered with. Gradually he becomes more sociable, so that at the infant school stage, say from the fifth to the eighth year, the unorganized and informal play of the nursery school gives place to organized play in the form of games. But the spirit of play, educative play, play in which real life situations are lived through by the children, is still dominant in the first-rate infant school. For this reason the method of the project or centre of interest, which we have described at some length, is more applicable, and in the best schools is more in evidence, at this stage than at any other.

The old bad tradition which made the three r's the real sum and substance of an elementary education, and which made direct instruction in the three r's a necessity of the situation, even in the infant school, dies hard in many places. The race for places in selective schools, grammar schools especially, has evoked the spirit of competition in the junior schools, which in their turn have expected the infant schools to initiate the children into the three r's. Thus the assumed exigencies of administration have been allowed to override the claims of child nature. We say the "assumed" exigencies, because few people stop to think what difference it will make to a

child's reading at the age of eleven, whether he begins formal lessons in reading at four or five, or at seven or eight years of age. The answer here suggested is that it will make no difference to the child's reading (except that he will probably become a more intelligent and a less mechanical reader) but that it may make a great difference to his happiness, and to his vital interest in all that goes to make up his world. The right time for reading lessons is the time when the child feels the need of them for further conquests. If the iron is struck when it is hot, the required result will be the more quickly achieved. It is idle to say that reading, and writing, and counting, can be *made* interesting to a child of four or five. A good teacher can *make* almost anything interesting. The point is that the child's occupations should *be* interesting in their own right. And learning to read and write will take its place among the child's interests as soon as he sees how great an advantage it is to get the story directly from the book, and to be able to write a little letter to his cousin or his aunt. If reading and writing are taken when the child is ripe for them, there will be no need of artificial little games with the letters, including playful suggestions about long tails and tall necks. One function of the project is to cause the child to see how desirable, and even essential, it is that he should learn to read and write; and the function of the formal lessons is to take that tide of interest at its flood.

The rest of the infant school curriculum will consist of stories, conversation, singing, playing games of skill, handwork and drawing, the care of plants and animals, and so on. In fact, it will differ only in degree and not in kind from the curriculum of the nursery school. The stories will provide endless opportunities of laying the foundations of future work in geography, history, literature and science. The conversational exercises will increase the child's power over his linguistic heritage, and will lay the foundations of his future efforts at "composition." The handwork and drawing should

provide another inherently interesting means of expression, and should begin what will afterwards develop into all that the child is naturally capable of, by way of beauty of conception, and skill in execution. The practical care of plants and animals (not the dull analytical nature-study lesson) will start the child on the road which leads to a loving appreciation, and in some cases to a life-long study, of the wonderful world in which he lives. And so on, to the last item of the work of an infant school. Here is a task for some of the finest minds in the teaching profession.

The junior school The junior school course, lasting until the child has passed his eleventh year, tends to be thought of in terms of those skills and dexterities which are the necessary tools of learning at the later stages. And this tendency is so far just, that the child must now master the three r's sufficiently for these tricks of mind to be used easily for their real purposes in life. The capable teacher, limiting his aims to what have been called the "minimum essentials," will find means of getting all but the dullest children to achieve this result without being bored by too much mechanical repetition. But a considerable amount of repetition there must be, though not necessarily without the spice of variety. Some of the complaints that are made about inaccurate spelling and calculation in this generation are manifestly unfair, but, so far as they are fair, they are due to lack of thoroughness and precision, and to a shrinking from the required memory work, at the junior stage. A child of eleven should be able to read whatever is of interest to him, to write legibly, to spell the words he wants to use, with the occasional help of a small dictionary, to tell a story, or give a description, in language that is at least grammatical, to write, not artificial themes, but things that he really wants to write, to perform mentally, with quickness and precision, those simple operations of arithmetic which everybody needs to perform, and, especially in the later stages of the junior-school

course, but not prematurely, to practise written arithmetic involving figures which he cannot "carry in his head." Though it is probably not true that memory is at its best at the age of ten or eleven, it is true that the motto "fast bind, safe find" is peculiarly applicable at that age.

As to the rest of the curriculum, the bane of most teaching in the junior school is the habit of thinking in terms of "subjects," each rigidly provided for in the document called the time-table. Handwork and drawing will be pervading elements of the scheme of instruction rather than definite subjects. The subjects known to adults as history (including scripture), and literature, and human geography, are, at this stage, all on the story level, and can be treated as such. Nature-study and the physical aspects of geography are one subject. Simple mathematics, including geometry as well as number, will be taught concretely. Singing lessons will be short and frequent. The school week will not be rigidly broken up into from twenty to thirty short periods, but the time-table, like that of a good infant school, will show longer periods under more general headings than the traditional list of subjects. A good deal of discretion will thus be allowed to the teacher, as to the actual methods by which the agreed syllabus is covered. It may be added that on this scheme a young teacher, fresh from college, need not intimate her helplessness because she happens not to have included a certain subject in her college course. She is there, not to teach a long list of subjects, but to open up a variety of interests, and to foster them by the contagion of her own interests, native and acquired. If, for example, she has not "done" geography at college, a daily newspaper and a map of the school district will suggest enough geography to go on with, and if she has not "done" history, she can easily find some well-illustrated books showing what sort of houses people lived in, and what their daily lives were like, from one generation to another. The case of not having "done" literature is not so likely to arise, except that young teachers sometimes

leave their training-colleges very imperfectly acquainted with the best literature for children at different ages. »

No young teacher should be bound down to a stated syllabus in each subject. In the past a head-teacher has deserved sympathy if, harassed by the requirements of a coming examination for junior scholarships, she has felt bound in self-defence to adopt methods of which she disapproved. But that time is passing.

Post-primary schools Of the curricula of post-primary schools of the future there is little that can be confidently or wisely added to our account of their general intention as given in Chapter V above. Secondary (grammar) education has its well-established traditions, but it is to be hoped that the view entertained in some quarters that the actual content of the curriculum is of less importance than its value as mental discipline will not prevail. Secondary (technical) education has its own way to make, and is to be a field of experiment in the years to come. Our junior technical schools, with their humanistic as well as technical outlook, point the way, but can do no more. As for secondary (modern) education, where so much remains to be done, it will be wise not to speculate, but to await the results of many promising experiments already begun.

Adult education Taken in its literal sense, the term "adult education" covers all forms of education for persons over eighteen years of age, including the education given in universities, schools of technology, and schools of art. But the term has acquired a special meaning which does not include the work, so comparatively definite in its scope, done in these institutions. We think of adult education as a kind of education which is by no means restricted to the years between eighteen and five-and-twenty, but which may continue throughout life. It is and must remain, therefore, entirely voluntary

on the part of the students; and the subjects studied, and the methods of studying them, must be largely determined by the students, no one being set in authority over them, as in the case of schools and universities. The chief point of interest for us is to note the broad results of this self-determination, so far as adult education has been developed in this country. University extension schemes naturally offered subjects of an academic kind, taught by the usual academic methods. The Workers' Educational Association responded to such demand as existed for subjects taught in universities, but substituted the tutorial method of instruction for the *ex cathedra* lecture, supplemented, at the student's discretion, by written work. The subjects mostly selected—in the case of university extension lectures by the authorities, and in the case of Workers' Educational Association classes on the initiative of the students—have included economics, philosophy, psychology, and sociology, appreciation of music, art and architecture, history and geography, literature, elocution and languages, and science. All these subjects, it will be observed, fall within the limits of what a writer such as J. H. Newman calls liberal education. But adult education, especially in the hands of the local education authorities, has gone beyond these limits, and courses are now wisely offered, not only in the "liberal" subjects mentioned above, but also in home-nursing, ambulance and hygiene, handicrafts, including woodwork, metalwork, leatherwork, basketry, etc., domestic subjects, including cookery, dressmaking, millinery, upholstery, laundrywork, etc., art, music, folk-dancing and physical exercises. In short, the tendency is to provide for all manner of tastes and aptitudes. It is necessary to add that the range of instruction extends from that which is quite elementary to that which is of as high a standard as advanced work in a university.

University studies We have already remarked on the place of universities in a country's scheme of education. They may be figured as the apex of a pyramid whose base is the schools for small children. They are places in which people not only learn to study, but, what is still more important, at least in the great residential universities, also learn to live. It is only with the studies of a university, however, that we are concerned at this point. And here let it be said that there is no reason why any intelligent person, even though he be not a member of a university, should not form some clear ideas of the general nature of university studies. On the contrary, there are many reasons why he should do so, among them being the fact that he is probably called upon to support universities financially when he pays taxes, and possibly, also when he pays local rates. To begin with, then, there is no essential connection between university studies and universal knowledge. The real character of university studies lies not in their number but in their quality. Not only must they be marked by thoroughness and accuracy (for the narrowest bread-and-butter studies may be thorough and accurate as far as they go), but they must be further marked by a consistent appeal to first principles, by a constant effort to gather help from kindred studies, and by an almost stern determination to follow truth wherever it may lead. The ideal university teacher is he who imbues his students with a love of sound learning, and leads the ablest of them to "the edge of beyond," where they may succeed in extending the boundaries of human knowledge.

The number of studies pursued in a university is by no means, of course, a matter of indifference. There was a time, not long ago, when Oxford, for example, aimed only at giving a culture which custom demanded in the making of a gentleman. It did not care for research, and it did not care for science or other modern studies. Also, "reversing history and disregarding the example of Salerno, the earliest university in Europe, it aban-

doned medicine to the London hospitals; and, forgetting Bologna, it left law to the Inns of Court." Now all is changed at Oxford. It extends its hospitality not only to the professions, but to a variety of modern studies, including modern history, English and other modern languages and literatures, oriental languages, the physical and biological sciences—not to speak of music, geography, education, economics and political science, anthropology, forestry, rural economy, archaeology, and so on. The younger English universities, created mostly in industrial cities, go further, and have in their ranks (to take only a few examples) professors of commerce, of textile and leather industries, and even of brewing.

The old-fashioned scholar shakes his head at these innovations. But they have in any case proved inevitable, and it is more profitable to ask what is their justification. To quote the words of one whose distinction and experience entitle him to a special hearing, "it is the function of the scholar to evoke into life wisdom and beauty which, apart from his magic, would remain lost in the past. A progressive society depends upon its inclusion of three groups—scholars, discoverers, inventors. Its progress also depends upon the fact that its educated masses are composed of members each with a tinge of scholarship, a tinge of discovery, and a tinge of invention. I am here using the term 'discovery' to mean the progress of knowledge in respect to truths of some high generality, and the term 'invention' to mean the progress of knowledge in respect to the application of general truths in particular ways subservient to present needs. It is evident that these three groups merge into each other, and also, that men engaged in practical affairs are properly to be called inventors so far as they contribute to the progress of society. But any one individual has his own limitation of function, and his own peculiar needs. What is more important for a nation is that there shall be a very close relation between all types of its progressive elements, so that the study may influence the market place, and the market place

the study. Universities are the chief agencies for this fusion of progressive activities into an effective instrument of progress. Of course, they are not the only agencies, but it is a fact that to-day the progressive nations are those in which universities flourish."¹

Conclusion There is a saying of von Humboldt, that whatever is to pass into the life of a nation must first be taught in its schools. To which saying we may surely add that whatever is to be effectively taught in the schools must first be cultivated in the universities. It is true that when the universities, and parallel institutions of kindred aims, have played their part in bringing the knowledge of a subject to the highest possible pitch of perfection, there remains for the school teacher the not less important task of selection and adaptation, with the child's needs in view. But the sound learning for which the universities stand is essential. A striking example may be seen in the teaching of geography in English schools. Easily within living memory this subject was taught only in the elementary schools and the training colleges, and there it was taught as an unscientific collection of isolated facts. If one wanted a good physical map, it had to be imported from Germany. Not until British universities undertook the study and teaching of geography could all this be changed. Perhaps the change has now gone too far, so that school geography, in becoming more scientific, has become less human than it ought to be. If so, we have another example of the fact that the university can do only half the work that is to be done for the school. The other half is the work of the skilled and sympathetic school teacher.

¹ A. N. Whitehead, "The Universities and their Function," in the *Atlantic Monthly*, May 1928.

"Subjects" We end our study of curricula, as we began it, *once more* with a reference to those isolated "subjects" in terms of which there is an inveterate tendency to think of the work of a school. We must bow to the specialist so far as knowledge of his subject is concerned, but we must do nothing of the kind when the question arises what part that subject is to play in the child's education—if only because the specialists do not agree. The specialist in mathematics has kept his pupils grinding at an endless succession of almost meaningless "examples," when he ought "to have been leading them to see the importance of mathematics as instrument of material conquests and of social organization, and . . . to appreciate the value and significance of an ordered system of mathematical ideas."¹ The specialist in science has sedulously led his pupils to believe that science is inherently conversant with glass tubes and unpleasant smells, when they ought to have been getting a general knowledge of natural phenomena, of the methods of natural science, and of the way in which modern science looks out upon the world. The specialist in history has made that subject military, political, narrow and insular, when his pupils might have become vitally interested in the genesis of the civilization in which they share. The specialist in physical exercises has regarded his pupils merely as so many "bodies," whereas he is no true educator unless, in addition to his special qualifications, he possesses "culture enough to enable him to discern the spirit beyond the body, and to understand, therefore, the moral value of order, of precision, of gracefulness, of agility, by which man externally realizes his personality."² The specialist in languages has wearied his pupils with the grammatical niceties of one, when the best of them might have been acquiring a working acquaintance

¹ T. P. Nunn, *The Teaching of Algebra*, p. 17.

² From Gentile's noble chapter on "Character and Physical Education," in *The Reform of Education* (Eng. trans.), p. 217.

with three.¹ Everywhere the specialist needs to be corrected, and kept in his place, by reference to a broader philosophy of life and of education than the specialist, as such, has at his command.

¹ The experienced traveller well knows the mighty difference between an elementary knowledge of a language and no knowledge at all. On this point the gloomy reminiscences contained in the autobiographical *Education of Henry Adams* (p. 38), are justified. We all know, of course, that a little learning is a dangerous thing, but only to the person who mistakes it for a lot.

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LEARNING AND TEACHING

Book and birch IN the old days, before school education became commonly diffused, most of the schools, of whatever grade, were small, and were managed by one or two teachers. It is not very easy now to form clear ideas of what actually took place in schools which have been abolished or transformed, but the attempt is worth while. A dame school, of the kind which abounded in England as late as 1870, may be pictured as a group of a dozen or twenty children of different ages, sitting round three of the walls of a room, the dame being seated near the fourth wall. One by one the children were called up to read, to "say their spellings," out of "spelling books" of the time, to "say their tables," and, if the dame's erudition extended so far, to show their sums. The child then went back to his place, probably a low bench, without a back, and unaccompanied by the luxury of a desk or table, and then, with a degree of industry determined chiefly by himself, proceeded further to con his lessons.¹ The mode of instruction in the old grammar schools was precisely similar. "The master sits on a throne at one end and calls up from the desks one or two boys at a time to say lessons. The arrangements of the room contemplate the learning of lessons on the boy's part, and the hearing of them on that of the master; nothing more. . . . The boys are told to learn, but they are seldom taught. . . . They cannot answer questions, because in the ordinary course of their instruction questions are never put."² What we know as

¹ A summary of the personal experience of a small child about the years 1869 and 1870.

² *Schools Inquiry Commission*, 1868. Report of J. G. Fitch, vol. IX, p. 177.

a collective lesson was never given. Teaching, such as it was, was individual teaching.

The faults of this mode of teaching, which prevailed not only in England but in other countries until far into the nineteenth century, were many and grievous. The teacher's time was badly economized, the work done by the pupils was mostly memory-work of the crudest kind, and, worst of all, it too often happened that a decent semblance of order could be obtained only by means of harsh words and severe punishments. On the other hand, it may be fairly said that at his best the old school-master bred in his pupils habits of self-reliance, of independent effort, and of patient perseverance.

Chalk and talk The individual plan of instruction, if indeed it can properly be spoken of as a considered plan, disappeared first in the elementary schools. The great problem that faced the advocates of popular education early in the nineteenth century was that of making large schools possible, for large schools were necessary if all the children of all the people were to be instructed. First came Bell and Lancaster's monitorial organization, for which it was claimed that a school of three hundred, all under one master, was just as feasible as a school of thirty. The master was to rule by the word of command, and the monitors were to do exactly as they were bid. The principle of the factory was consciously and intentionally applied to the school. Even in its heyday, the system had its severe critics,¹ who held that every teacher should be an adult, who, however, might teach a large class collectively, seated either in desks or in a gallery. When, about the middle of the nineteenth century, monitors, who were children, were replaced by pupil-teachers, who were adolescents, an enormous development of collective teaching fol-

¹ Notably David Stow, *The Training System of Education*, Sect. 1, ch. vi. Stow rightly contended that child teachers could have little or no moral influence.

lowed. To teach meant to give a lesson, and to give a lesson meant to stand in front of a class, equipped with blackboard, chalk and duster, with prepared illustrations, with maps, and with apparatus, and by these means to demonstrate and to lecture, or alternatively, when the subject was suitable, to keep up a "brisk fire" of question and answer. This was the kind of effort learnt during the pupil-teacher stage, and perfected at the training college, from about 1850 onwards. The method of chalk and talk had replaced the method of book and birch. It must be added, however, that although books, except scrappy little "readers," were relatively scarce in the elementary schools, the birch continued to be much in evidence.

The craze for uniformity The collective method had, and still has, its virtues, as we shall see. But it had one vice which was characteristic, and unfortunately was also fatal to real education. A teacher, unless he were a person of exceptional ability and resource, faced by five or six rows of children, ten or a dozen in each row, could do no other than deal with them as if they were just as much alike as so many rows of pins. Of course, he could not fail to distinguish the dull and the bright—the children who could never answer his questions, and those who could answer them before they were completely asked—the children who speedily "got all four sums right," and those who failed to get one right. But it was the *same* oral lesson, the *same* questions, the *same* four sums, the *same* blackboard demonstration, the *same* piece of dictation, the *same* "reader," for all alike, and the bright children usually had to fold their arms and sit still, until the dull ones had been galvanized into getting something done. In the case of English elementary schools, there lay at the back of this standardized procedure the fact that each child, bright or dull, submitted to the *same* examination at the end of the year. The annual examinations were swept away finally in 1897, but the worship of uniformity as an ideal, throughout a period of

thirty-five years, had effects which could not be undone in a day, nor even in a generation.¹ Large classes, and the lack of suitable books, are contributory causes which to this day keep many a teacher sitting on his throne, exerting a mild but effective intellectual despotism over his small subjects.

Notes of lessons The universality of the collective lesson, with its accompaniments of chalk and talk, gave rise to a branch of pedagogic literature known as "notes of lessons." The teacher could obtain ready-made notes of lessons on a variety of subjects, including lessons on objects, lessons on arithmetic, geography, grammar, history, and so forth. Even at their best, these productions had all the faults of ready-made clothes. At their worst they were mere collections of odds and ends of information, arranged without the least regard to a child's natural way of approaching a new problem. If, for example, the teacher wished to give a lesson on sponges (the two previous lessons having perhaps been on putty and saffron) his book of notes probably suggested a treatment under these heads: (1) where found, (2) how formed, (3) qualities, (4) uses. Better books were produced by some of the "masters of method" in the training colleges, who pointed out that, to say the least, this was beginning at the wrong end, since the one thing a child did know about a sponge was—what it was used for. The masters of method were also inclined to insist upon the notes being arranged in two columns, one for matter and the other for method—in order that the latter should receive definite consideration. Small wonder that the method, based upon an inadequate study of children's ways, should become stereotyped, and that the matter should often be arid, and lifeless, and inaccurate, since it proceeded, not from fullness of knowledge, but from what could be got up for the occasion.

¹ For the classic condemnation of the system see Edmond Holmes, *What Is and What Might Be* (1911). Most of his fellow inspectors either defended the system or laughed at it. Few of them seemed to see the tragedy of it.

The formal steps of instruction Suddenly in the 1890's a new light broke upon the pedagogic scene, first in the teachers' training colleges, and afterwards in the primary schools. It came to England from Germany via America. We saw in the preceding chapter how at that time enterprising American teachers studied education in Germany, and went back to America full of enthusiasm for the system of educational doctrine and practice derived from the writings of Herbart. In its own way the Herbartian system covers the whole field of educational thought, and therefore it cannot here be even summarized. The parts of it which quickly became popular among progressive teachers were the theory of correlation of subjects, already explained, and, more noteworthy still, the theory of the "formal steps of instruction." Herbart, or, more strictly, his followers and expounders, formulated the "steps" which, of psychological necessity as they supposed, every new lesson ought to take. One might choose an example from any subject taught to pupils of any age. Let us take as our example a lesson on the honey-bee, intended for pupils of about thirteen years. We give the briefest notes, adapted from a book very well known in its day.¹

Aim. We are to learn to-day about the honey-bee.

Step 1. Preparation. Before we examine it more closely, tell me what you know about it.

Step 2. Presentation of the new.

- (1) The kinds of bees; queen, workers, drones; their structure.
- (2) The bee community and their social life.
- (3) Religious significance of bees among different nations.
- (4) Countries where honey is now chiefly produced.

Step 3. Comparison, or formation of concepts.

- (1) Comparison of working bee with queen and with drone.

¹Felkin's *Introduction to Herbart's Education*, p. 118.

- (2) Difference between wing of the honey-bee and wing of the cockchafer (a lesson on which had been previously given).
- (3) Comparison between these two insects as to structure of mouth and mode of feeding.
- (4) Comparison of their mode of development.

Step 4. Recapitulation or generalization: summary of acquired concepts.

- (1) Oral summary of chief characteristics of honey-bee.
- (2) The pupil writes a summary in his note-book.

Step 5. Application of concepts. Oral or written answers to systematically arranged questions, e.g.

- (1) What organs does the bee possess for feeding, and for defence?
- (2) With what organs does it produce (a) honey and (b) wax?
- (3) What countries in Europe (a) in ancient times produced, and (b) in modern times chiefly produce, honey and wax?
- (4) What is meant by saying, "He is as busy as a bee"?
- (5) Draw, as seen under the microscope. (a) an eye, (b) a foot, (c) the sting, of the honey-bee

And so on, for such "applications" could be extended indefinitely. It was claimed that "by this method of teaching, the pupil is raised above dogmatic, mechanical parrot-like learning by rote, and is taught to think, to form clear concepts, and to apply them practically." Other, and still greater, claims were made, which need not here detain us.

Remarks on the formal steps The natural man loves a formula which will save him the trouble of thinking, and the formula known as "the five formal steps of instruction" was so ardently adopted in the training colleges that no student might venture to depart from it. Lessons of

all types were forced into the same mould, often in an arbitrary fashion. To the thoughtful critic, however, it soon became clear that something was wrong with these unvarying "steps." For one thing, he saw that, corresponding with the psychological categories of cognition, volition, and emotion, there are three types of oral lesson, according as the dominant aim is the acquirement of knowledge, or the acquirement of skill, or appreciation and enjoyment. Of course, no lesson is confined to one of these aims, but, as a rule, one of them is dominant. The early Herbartians made the mistake of assuming that the dominant aim is always the acquirement of knowledge.¹ Later text-books for young teachers rectified the matter in part by providing a separate series of steps for lessons involving the element of practical skill, such as lessons in writing, drawing and handwork in its various forms. The steps in these cases were held to be (1) the preparation stage as before, (2) the presentation of a model for the pupil's imitation, (3) the rules of the art that is being taught, and (4) practice by the pupil.² Still later text-books added a separate treatment of the "lesson of appreciation."³

Use and misuse of formal steps In principle the "formal steps," thus revised and adapted to lessons of differing types, constituted an advance on the older method of preparing a collective lesson, because they suggested definite lines upon which the lesson should be thought out. The trouble was that, like all rules and formulas, the formal steps, instead of being accepted as an aid to thinking, tended to become a substitute for thinking, and it is, therefore, not to be regretted that they have fallen into comparative disuse in places where teachers are trained. So far as the psychology underlying the steps is sound, they are still of value as a general guide

¹ The root of this mistake lay in Herbart's peculiar psychology

² See Findlay, *Principles of Class Teaching* (1902), Sect. IV

³ E.g. F. H. Hayward, *The Lesson of Appreciation* (1915)

and a temporary help to the young teacher preparing an oral lesson for a whole class of children. But, as in solving problems in mathematics, so in solving the problems presented by a teaching situation, it is always better to work from first principles than by the mechanical application of a formula. Above all, the most refined methods of procedure are of no avail without an adequate knowledge of the subject to be taught. The purpose of a study of method is not to enable a little knowledge to go a long way, but to enable adequate knowledge to take its maximum effect. The writing of full notes of a contemplated collective lesson is rightly exacted from a student in a training college, because an important part of his training consists in the careful preparation of a limited number of such lessons; but, in determining the sequence of treatment, he should accept the guidance of the formal steps only in a general way. What he really has to rely upon is, (1) his knowledge of his pupils' interests and of the working of their minds, gathered from his own experience, helped out, maybe, by his study of psychology; and (2) his knowledge of his subject, and of its historical development as a branch of human culture. The broader the teacher's outlook, and the more at home he is in his subject as a great branch of the intellectual achievements of the race, the less use he is likely to find for such temporary aids as the formal steps, but as temporary aids they are not to be despised.

The one exception we perhaps ought to make is the lesson of appreciation—such, for example, as the literature lesson. A well-known writer, recalling his own boyhood, enunciates his “one clear theory about the teaching of literature, and it is this, that all we have to do is—to find for an English master a burning enthusiast for literature, and *then leave him alone*. . . . The true teacher of literature, if he is worth his salt, is himself something of a creative artist, and no outsider may say to a creative artist, ‘This way shall thy creative art flow and no other.’”¹

¹ Ernest Raymond in *Education and Leisure* pp. 86–7.

Individual work We have dealt in some detail with the collective lesson, on the assumption that, notwithstanding all the hostile criticism which has been levelled against it in recent years, a place for collective instruction still remains in all educational institutions. But it is now time to consider this criticism, and the consequent changes that are taking place in school-room procedure. The collective lesson, and indeed all teaching which deals directly with a whole group or class of pupils, proceeds on the tacit assumption that the differences between individual children are not important enough to be taken into account, as against the practical convenience of teaching the class as a whole. The class teacher assumes, or at any rate hopes, that all his pupils will react similarly to his lecture-lesson, or to the common task he has set them, and that on the whole they will make progress at approximately the same rate. Of course, everyone knows that the expectation is a vain one, but teachers in general, especially those who have to deal with large numbers, have submitted to the convention that all children are born equal. The opposite and truer view, that some are "born long" and others "born short," and that even equal gifts may be of diverse quality, is passing more and more from the stage of theoretical assent to that of practical school organization. Class instruction has to a considerable extent given place to individual work. To this result the psychological study of individual children, and, in particular, the extensive use of intelligence tests, has contributed. Whatever it may be that the tests really measure, they have brought out with the utmost definiteness the previously indefinite fact of individual differences.

Influence of Dr. Montessori One of the strongest features of the educational movement associated with the name of Dr. Maria Montessori, probably that which will secure to her an enduring place in history, is her insistence upon respect for the child's individuality, and upon each child

advancing at his own rate, by means of his own individual efforts. Many years before this movement began, the disciples of Froebel had, in their relatively expensive kindergartens, demonstrated the advantages of small classes, and had joined in the protest against the large classes and the mass instruction to be found in the English elementary schools. But it remained for the Montessorians to advocate and to practise—with what chance of ultimate success is another matter—the abolition of the class, small or large, as a teaching unit. When they were accused of tolerating large classes, their reply was that, although there might be many children in the room, there was no “class,” but just a collection of individuals; no class teaching, and for that matter no teaching at all, the person in charge being expressly called a directress and not a teacher.

The Dalton plan The influence of the Montessorians upon the teaching of the younger children is paralleled by the influence of what is known as the Dalton plan upon the teaching of older pupils. In principle this plan has the same aim—the elimination of class instruction, and the cultivation of individual effort and individual responsibility. A certain amount of work is prescribed in each subject for a defined period, say a month, the individual pupil being left to get the work done in his own way, provided he gets it done. The teacher becomes an adviser, and the form-room becomes a subject-laboratory. The responsibility for getting the work done is removed from the teacher's shoulders, and placed upon those of the pupil. The pupils are still grouped in forms for convenience in general organization. The objectors to the system say that it throws too much responsibility upon the pupil, and that it presupposes a degree of perfection in textbooks which does not exist. What one mostly finds in actual practice is that a portion of the day is assigned to individual work, and the rest to lessons of the usual type.

Individual work no new thing The curious thing about these much discussed plans of individual work is that, so far from being new, they are, on the contrary, a reversal, on more intelligent lines, to the old plan of teaching which, as we have seen, went out when large schools came in. Large schools and large classes seemed to necessitate continuous collective instruction throughout the day. We are now beginning to see that no such necessity existed. In fact, we are still learning how to "run" a large school without passively ignoring or actively repressing those individual differences between each of us and his neighbour which, among other things, make life so abundantly interesting, and which are certainly as marked among children as among adults. Teachers here and there, and especially teachers in small schools, had never abandoned the old individual method, but the movements associated with the person called Montessori and the town called Dalton represent most laudable efforts to bring individual work back again into all schools and classes, large as well as small.

Place of collective teaching To bring back individual work—but with differences. There was a dangerous degree of truth in the saying that whereas in the old days the pupil learnt the lesson and said it to the teacher, in modern times the teacher learnt the lesson and said it to the pupils; and it was imperatively necessary that a change should set in. But the change must not be sweeping and complete. It has been said that there is a mass of conservative opinion against individual work, because in his heart of hearts the teacher likes class teaching. His liking for class teaching, though it needs to be curbed, is a significant fact, and constitutes an important element of truth in the whole teaching situation. Talk as we may of the school becoming child-centred instead of teacher-centred, there will always remain numerous occasions on which the teacher quite properly stands in the

limelight. Who does not recall an oral lesson, or maybe a continuous lecture, most likely on a literary or historical theme, which has acted as a strong stimulus to individual effort, and has even marked a turning-point in successful study? No derisive references to chalk and talk should therefore blind us to the value of the collective lesson as a means of inspirational teaching, though we must remember that the intellectual life can no more be supported by inspiration than the physical life can be supported by tonics.

And of school broadcasting The argument for the collective lesson, used in moderation, holds good also for listening to broadcast talks.

Reference was made in an earlier chapter to the more general influence of broadcasting, and to the kinds of broadcast talks that have been found most useful. So far as schools and children are concerned the great thing to remember is that talking is not teaching, and that for children nothing can take the place of personal contact. An oral lesson, as distinguished from a talk or lecture, consists in the free and unimpeded *exchange* of ideas. The claim has, indeed, been made for broadcasting that it gives children a definite training in careful and attentive listening to a continuous discourse. But the ability to listen for a fairly prolonged period, unless it be to a thrillingly interesting story, is not a common attribute of childhood, and it is to be doubted whether there is much scope for this kind of training which is not sufficiently provided by the usual methods of the teacher. Continuous listening to a voice from the void, at any rate after the novelty is worn off, one would expect to be chiefly appropriate to adults, and it is satisfactory to know that broadcasting is being tried as a method in adult schools and classes. Even here, however, the talk will end in little or nothing of value, unless it be regarded as supplementary or introductory to the teacher's work and to serious study. This is pretty evident when one finds that the range of

subjects covered by broadcast talks used in adult schools has included architecture, anthropology, astronomy, botany, economic and social history, foreign affairs, languages, literature, music, natural history, psychology and physiology. On the whole, we may safely say that broadcasting as a method of instruction has passed through a stage of careful experiment, and is establishing itself as a useful classroom aid.¹

The purposive nature of the mental life It must be re-emphasized that the collective or oral lesson, and still more the lecture or talk, is of value only in so far as it conduces to individual and original effort. Why is it that the best series of oral lessons or of "talks" on, let us say, literary, or historical, or scientific themes, is of itself essentially ineffective, even though the lessons be arranged in a manner which would satisfy the straitest sect of apperceptionist Herbartians? It is because the psychology underlying the formal steps is "a schoolmaster's psychology," to use a phrase which is perhaps a little hard on the modern schoolmaster. According to the formal steps, the teacher begins by ascertaining the child's present stock of ideas about the subject in hand, and then proceeds to lead him on, gently but firmly, to an enlarged stock of particular ideas, thence to the generalized results, and thence to the applications of those results. But there are limits to a healthy-minded child's willingness to be led, however gently, towards a goal which is determined and clearly foreseen by the teacher only. The goal should be consciously his, and not the teacher's only. For, as the modern psychologist is never tired of reminding us, the mental life, and indeed all life whatsoever, is essentially purposive, it is a striving towards a goal. In us it is the will-to-live, the urge, the "hormic" energy that manifests itself in all human and animal behaviour,

¹ For a review of the progress made in school broadcasting see *School Broadcasting in Britain*, Richard Palmer (B.B.C.), 1947.

In 1952 experiments with television in schools were begun.

and breaks up into instinctive channels. The goal towards which this striving aims may be dim and vague or even unconscious, as in the lower forms of life, and to some extent in the higher forms also. And in the case of man himself, the aims of which he is conscious may be immediate or remote. But always they are there.

A typical instance Consider the case of a young man, perhaps a typical reader of this book, who means to become a professional teacher. If he be a normal young man, one of his controlling purposes is to marry, to settle down, to have an establishment of his own, and to found a family, as his father did before him. He may be clearly or only vaguely conscious of this purpose, or he may sway between the one and the other. In any case it is at his age a rather remote purpose. He knows that he cannot achieve that purpose without success in his profession, which is a less remote purpose. He knows again that he is unlikely to succeed in his profession without first succeeding as a student, which is a still less remote purpose. And he may be convinced that he is not likely so to succeed, unless he settles down to work this very evening, and resists the temptation to visit a place of amusement—a choice which involves an immediate act of striving. Finally, he is not likely to achieve his great object, unless he lives cleanly and temperately, and so one of his immediate purposes is to play a good game and to “keep fit.” Thus his whole life, if healthy and truly lived, may be regarded as a hierarchy of purposes. In Victorian times, books used to be written for the benefit of young men, bearing such titles as *Living in Earnest*, and *Living to Purpose*,¹ and the young man was enjoined to “be not like

¹ The writer calls to mind a passage in one of these books. “The longer I live, the more firmly am I convinced, that the great difference between men, between the powerful and the feeble, the great and the insignificant, is *energy*, invincible determination: a purpose once fixed, and then death or victory! That power will do anything that can be done in this world and no talents, no opportunities, can make a two-legged creature a Man without it.” (Sir T. F. Buxton.)

dumb driven cattle," but to "be a hero in the strife." Such books are now replaced by popular psychology, but in one form or another this gospel of purpose is always preached. And, to come to our present point after this excursus, what the young teacher has to realize is that this element of purpose or striving is just as good and true for the child as for himself. On the whole, the child should be neither harshly driven nor firmly led, but should voluntarily strive towards an aim which he clearly sees, though in his case the aim will be immediate rather than remote.

The learning process Having said so much about the generally purposive character of the mental life, let us come down to the details of the school-room. The practical inference is that when all has been said that can be said for class-teaching, including oral lessons that alternate between narrative and interrogation, the fact remains that in the school of the future the rooms will be constructed and equipped, not for rows of listeners, but for groups of workers and for individual workers. Teaching will more and more take on the form, not of telling nor even of "eliciting," but of causing to learn, to learn to know, or to do, or to appreciate. For this reason, modern treatises on education and educational psychology differ from the older treatises in having less to say about teaching, and more to say about learning. Experimental psychology has to some extent supplemented the vaguer findings of introspective psychology by more precise investigations into the learning process. Now the learning process is at its best when it means trying to solve a problem; which is the same as saying that whatever he may be learning, the learner, whether child or adult, should have a definite purpose in view. For the sake of illustration, suppose the problem to be that of solving a mechanical puzzle, and suppose the learner not to possess a high degree of intelligence, or at any rate not to be of a mechanical turn of mind. His method

will inevitably be the method of fumbling, until, by accident, he succeeds. He may succeed more quickly at the second attempt, and still more quickly at the third, but his success is the success of the fumbler. His method is *the method of trial and error*, which he practises blindly in the hope of meeting with trial and success. But suppose that when he was well-nigh desperate, someone came to the rescue, with the friendly offer, "I'll show you how." Our learner would, if he accepted the offer, solve the puzzle more quickly than by the method of trial and error, for he would get rid of most of his difficulties by employing *the method of imitation*. Suppose, lastly, that he had been the kind of person who naturally makes a skilled mechanic, a person of distinctively mechanical turn of mind. In that case he would have indulged in little or no mere fumbling, and he would not have accepted the friendly offer. He would have examined the puzzle carefully, would have been quick to see the relations of its parts, and would in short, whether success came soon or late, have solved the puzzle by *the method of intelligent analysis*.

The problem method These three methods, trial and error, imitation, and intelligent analysis, meet us at every point when we are examining the learning process.

We all employ them, adults as well as children, though the relative extent to which we employ them depends upon ourselves, and upon the kind of problem we are engaged upon. In learning to tie a bow, trial and error along with imitation may be enough; but, in learning to drive a motor-car, imitation of a teacher and a certain amount of intelligent analysis of mechanism are absolutely necessary, and it is literally at our peril, and at other people's peril, that we make liberal use of the primitive method of trial and error. It may be objected that in selecting such examples as solving a puzzle, tying a bow, and driving a car, we are limiting our survey to cases of manual skill, whereas school work includes forms of skill and much besides. But

there is no hard-and-fast line to be drawn between the intellectual and the practical. They run into and involve one another. There is no practical problem which may not involve that adaptation of means to ends which is characteristic of thinking, and there is no intellectual learning which is not essentially active. That is why the problem method should be applied, not only in mathematics, but in all other subjects. The problem may be that of improvement in penmanship or in reading, writing an essay, solving a mathematical question, finding out what information a map conveys, getting at the facts and the associations of an event in history, learning to draw, or to paint, or to sing, or to play a musical instrument better than before, or learning the next step in the acquirement of a craft, or of a foreign language. There is no branch of the learning process in which the problem method may not be employed with advantage. Always there is something to be *done*, and always the three methods referred to above are more or less in evidence. It will, therefore, be worth while to add some further explanations regarding each of them.

Trial and error The trial-and-error method is characteristic of animals, and a number of experiments on animal learning have been made with a view to throwing light on learning in general. For example, a hungry cat is placed in a cage or box, fitted with a door which can be opened by pulling a string. The front of the box consists of vertical bars, each side of the door. A piece of fish is placed outside the front of the box, not within reach of the cat's paws. Of course, pussy makes many efforts to reach the tempting morsel, but fails every time, until at last she accidentally pulls the string. The same experiment is tried, perhaps a dozen times. The random attempts become fewer and fewer, until at last they practically disappear, the cat having learnt the trick. Similar experiments have been made with a rat in a maze, a terrier and a gate-latch, and even fishes snapping at minnows.

Now all this experimenting is interesting enough as throwing light on animal psychology. But it appears not to help us much when we come to human learning. The animal learns thus because he does not possess the intelligence to analyse the situation. A human being who learnt habitually in that way would properly be called stupid, and to encourage children so to learn would be equivalent to the cultivation of stupidity. All we can say is that there is a certain amount of the hit-or-miss method of learning in most people's initial attempts. This is true of swimming and skating, golfing and type-writing, playing an instrument, and paddling a canoe. The same may be true, not only of motor acts such as these, but also of solving a geometrical problem or a crossword puzzle. But the less use we make of the trial-and-error method, the more pleased we are with ourselves, and rightly so. We prefer to leave that method to animals, to very young children, and to idiots and imbeciles.

One of the chief authorities has formulated, on the basis of these experiments, certain laws of learning, of which the first and foremost runs thus: "When a modifiable connection between a situation and a response is made, and is accompanied or followed by a satisfying state of affairs, that connection's strength is increased; when made and accompanied or followed by an annoying state of affairs, its strength is decreased."¹ No doubt this is true, and it is true in a wider sense than that which is exemplified by the experiments. If, for example, one says to a class of boys—"You know it is very important in business to be quick and accurate at figures, so I'm going to try you on six long division sums, all to be proved by multiplication," the probability is that, to say the least, a boy will acquire no dislike for long sums on account of this exercise.

¹ Thorndike *Educational Psychology*, vol. II. For an excellent criticism of this writer's "behaviouristic" laws of learning, see B. H. Bode's *Conflicting Psychologies of Learning*, ch. x. The validity of Thorndike's conclusions has been called in question in E. S. Russell's *The Behaviour of Animals*.

But if one says to a boy—"You have been lazy this morning and so, to teach you a lesson, I propose to keep you after school hours, and give you six long division sums to do, to be proved by multiplication," the probability is that the boy will not in future respond with alacrity to the situation created by such a set of sums. And if it makes anyone happier to express the fact in the terms quoted above, he is entitled to his happiness.

Imitation To solve a puzzle, or any kind of problem, by the trial-and-error method, i.e. to stumble on the solution by accident, yields little satisfaction to an intelligent person, except perhaps that which comes as the reward of patience. He prefers to try again and again to get the solution "by insight," as the psychologists say, and, if he fails, to watch the demonstration of one who knows, and to imitate him. Perhaps the demonstration is accompanied by explanation, for the use of language makes all the difference between human and animal learning. But imitation, though sometimes necessary, is far inferior as a method of learning to that which is accompanied by the joy of discovery. Yet the encouragement of mere imitation is rampant in some of the text-books, especially, perhaps, the text-books of arithmetic, where all the possible variants, e.g. of "clock sums," are sorted out, and a typical solution is given of each sort, so that the pupil has nothing to do but imitate that solution. He may thus be better prepared to pass his examination, but he has not been well trained. As every good teacher knows, there is a great difference between finding out and being told. Part of the fine art of teaching consists in knowing just how much help to give, in order to facilitate the truest kind of progress, which includes increase of power, as well as increase of knowledge.

Analysis and insight Better, then, than mere imitation of another's action or reasoning is that intelligent analysis of a situation or a problem which is man's special prerogative, and which, as we have said, is closely connected with his use of language. This, of course, is no new thing, although it is sometimes put forward by the experimentalists as if it were. It is a thesis of quite respectable age, that the pupil should be placed as far as possible in the position of a discoverer, that he should not be told what he can find out for himself. Even in learning things that must eventually become automatic, such as sawing or planing a piece of wood, or gaining a feeling of confidence on a bicycle, or using a pen, or swimming, or skating, there is something to be said for a preliminary analysis of the situation. To throw a boy into the water is hardly, after all, in most cases, the best way of helping him to learn swimming. But when it comes to learning and applying the rules of arithmetic, or the grammar of a foreign language, or solving problems of any kind, the more the method of discovery is encouraged the better. But it is not encouraged by a refusal of help on the part of the teacher, when the pupil's best efforts have not availed

Memory work So far we have envisaged the learning process as learning to execute different forms of skill, and learning to attack and solve problems in the various subjects of the curriculum. But we must not omit to consider the process commonly known as learning by heart. In former times there was, as we saw earlier in this chapter, far too much of this type of learning in schools—learning by eternal, and often quite unintelligent, verbal repetition. Perhaps the pendulum has now swung too far in the other direction. A child learns to build up the multiplication table intelligently, but he can never be quite sure whether seven 8's make 56 or 63. He has learnt French by the direct method, but he is never quite sure of his grammar. He has learnt to write a good letter in a fair

hand, but he is never quite sure of his spelling. He has learnt a lot of interesting things in history, but he is never quite sure whether an event occurred in the sixteenth century or the eighteenth. And so on. The complaint is that the modern young person's knowledge, though perhaps more extensive than that of his parents and grandparents at the same age, tends to be "woolly" and inaccurate. Something might be gained if general agreement could be secured as to what a child should have "got by heart," say at the age of eleven. Such an agreement should, however, extend only to what have been called "minimum" essentials.

Economical learning The informed teacher in these days takes heed lest he require or encourage the pupil to learn by wasteful and unintelligent methods. The writer well remembers being set to learn Scott's *Marmion* before he had the least idea what "Norham's castled steep" might be, or of the general drift of the narrative, and he believes that thousands of people could bear similar testimony. It is hardly necessary now to say that normally a child should not be required, nor even allowed, to learn anything by heart which he does not thoroughly understand before the learning process begins, and that in the case of poetry most of the learning should be done insensibly by frequent reading. It follows (and here we come upon a common-place of experimental psychology) that a poem of moderate length should not be learnt stanza by stanza, but that it should be taken as a whole again and again until it is mastered; or, more generally, that learning by wholes is more economical than learning in parts. This is not the place to enter upon a fuller discussion of memory-work in education. For such discussion the reader is referred to the books on educational psychology.

REFERENCES

On the preparation of lessons, the old books of detailed "notes" have mostly given place to suggestions. L. C. Mossman's monograph on *Changing Conceptions relative to the Planning of Lessons* (Teachers' College, New York) shows that the changes outlined above have been closely paralleled in America.

On individual work and purposeful activity see P. B. Ballard, *The Changing School*, ch. xiii; H. Parkhurst, *Education on the Dalton Plan*; W. Boyd (ed.), *Towards a New Education*, especially Pt. II; A. Hamaide, *The Decroly Class*.

Experimental work on the learning process is well summarized by P. Sandiford, *Educational Psychology*, Pt. II.

On memory work see the general text-books of educational psychology noted at the end of Chapter III; also H. J. Watt, *Economy and Training of Memory*.

EXAMINATIONS

Importance of subject THE reader may very well ask whether, in a book which aims at discussing the fundamental problems of education within the limits of a dozen chapters, it is wise to devote a whole chapter to the subject of examinations. After all, it may be objected, are not examinations merely a device, a piece of machinery, that does not affect the rock-bottom principles of education? Can examinations be said to form part of any sort of philosophy of education, like the rest of the problems discussed in this book? As we proceed, it will probably be allowed that very important principles are involved in any serious discussion of examinations. Obviously they have formed a prominent part of English practice, except in the education of young children, and their influence has extended subtly, even down to the kindergarten, or infant school. And if, as we assume throughout, the theory or philosophy of education is only another name for practice which has come to full consciousness, it seems likely enough that the subject of examinations deserves the careful attention, not only of persons who actually administer them, but also of persons who make it their business to think systematically about the problems of practice. Another reason why we should here deal with examinations is that upon no educational theme is there more constant discussion or greater difference of opinion. On the same day we may find a headmaster stoutly defending examinations as part of the school system, and a well-known teacher and thinker declaring that English education is suffering from "an external machinery which kills its vitality."¹

¹ A. N. Whitehead. *The Aims of Education*, p. 20.

Retrospect

(a) *Universities* In most of the higher educational institutions of England, including the universities and the secondary schools, great stress is laid upon thorough and impartial examination as a condition of obtaining any certificate or diploma or degree. It is probably true to say that whereas in other countries, including the United States, regular attendance at the course of study is reckoned at least as important as, or even more important than, any examination test, in England the contrary is the case. To some extent opinion and practice have become somewhat softened and modified here and there, but not to a great extent. The causes of this strict and conservative estimate of examinations lie, of course, in the history of England's educational system. In the early years of the nineteenth century written examinations began to take the place of oral "disputations" at Oxford and Cambridge. As time went on, and as the qualification for a degree became more than a question of mere residence, examinations became more and more important. Then came the University of London which in 1858 threw open its examinations, except in medicine and surgery, to all comers, irrespective of the place and mode of education and thus effected a complete severance between the teaching and the examining functions. The still younger university institutions began by submitting to the examinations of the University of London, but one by one they have become independent universities with their own examinations, thus restoring the connection between teaching and examining, but still retaining strict examination as a condition of the award of degrees and certificates.

(b) *Secondary schools* Until the opening of the twentieth century England had no real system of secondary education, subsidized and supervised by the state, but relied upon her old endowed schools, the education in which had fallen upon evil times in the eighteenth and early nineteenth centuries. A little past the middle of the nineteenth

century, Oxford and Cambridge instituted local examinations for schools, and these examinations had the effect of systematizing the curricula and raising the standards of instruction, but there was no connection between the teaching and the examining functions. All the universities, both the older ones and those which came into existence later, had their own entrance examinations, whilst the various professions also guarded the entrance to places of training by means of *ad hoc* examinations. Thus the secondary schools were confronted by a chaos of examination requirements, much alike in general, but exasperatingly different in detail. Through the action of the central authority an effective measure of order and simplification was introduced,¹ so that a certificate obtained by having passed a school examination conducted under university auspices became, under stated conditions, generally accepted as an entrance qualification by the universities and the various professions. But still the principle remained that a pupil leaving a secondary school, whether requiring only a school leaving certificate, or requiring an entrance qualification for a university or a professional school, had to pass an examination in subjects selected from certain groups, this examination being conducted by an outside authority. The teacher had little or no voice in the matter. The teaching and the examining functions were kept quite distinct.

(c) *Preparatory schools* Before proceeding to consider the case of the elementary schools we may take note of the "preparatory" schools, which have pupils covering an age-range similar to that of the former elementary schools, but which send boys on to the public schools as we understand that term in England. The curriculum of the preparatory school is absolutely dominated by what is known as the "common entrance examination," taken at the age of

¹ *Report of Consultative Committee of Board of Education on Examinations in Secondary Schools* (1911).

13, and requiring an admittedly low standard in a good number of subjects. In order to realize the effects of this arrangement, it is enough to examine the examiners, i.e. to peruse the papers which are set year after year, and to get acquainted with the tips and dodges which are employed in order to enable even the average pupil to pass. One is then prepared to accept the verdict that "boys so taught are in such a state of mental confusion that they cannot be taught with effect in the ordinary classes, and they have lost the desire for knowledge with which almost everyone starts. . . . It is a system which no tinkering with the papers can mend—the right course is to end it."¹ It is right to add that the preparatory schoolmaster was almost helpless in the matter, since he had to take his marching orders from an outside authority.

(d) *Elementary schools* In the English elementary schools the principle of an annual examination, conducted by an impartial outsider in the person of an inspector, prevailed from 1862 for about thirty-five years. The examination was individual in what were deemed the essential subjects, and by classes or groups in other subjects. The amount of the Government subsidy was largely based upon the results of the examination. This was the plan, alike famous and infamous, known as payment by results. But there is obviously no necessary connection between examination and payment, and it has been suggested in some quarters that the former might advantageously be revived without the latter. In effect, the principle of an external examination was applied to selected pupils at an early age, because of the competition for places at the secondary and selective central schools. A clear distinction must always be made, however, between educational and competitive examinations. No one pretends that competitive examinations are educational. But likewise no

¹C. Norwood in *The Times Educational Supplement*, 22nd Sept. 1928.

one ought to pretend that competitive examinations are other than destructive of true education. It is well known that the competition for "scholarships" at the age of eleven, which, of course, meant in practice that preparation for the fray began long before, extended its baleful influence right down to the infant school.

External and internal examinations Such is our past with regard to examinations. A searching test, in which an independent outsider takes a predominant part, has been in England reckoned essential as a proof of sound education, at most stages beyond the elementary school. But now an important distinction has to be emphasized. An *external* examination we define as one in which the teaching and examining functions are completely separated. The papers of questions, or other tests, are prepared, and the answers are assessed, by an outside or external examiner. Gradually the supremacy of the external examiner has been modified; the examination for the general certificate of education is still, however, mainly an external examination. The external examinations for degrees and diplomas still conducted by the University of London, irrespective of the place and mode of education, is another important exception, for which, however, a good case may be made, partly historical and partly on grounds of expediency.

Under the system of *internal* examination, the teachers in each department of study play an important part, first in the construction of the schemes of work, and afterwards in suggesting the papers of questions and in assessing the candidates' answers. The usual duties of the external examiner are (1) to revise the papers of proposed questions, amending the questions, possibly adding or substituting questions of his own, and seeing that the paper fairly represents the syllabus; and (2) to read a proportion of the scripts, including all doubtful cases, after they have been marked by the internal examiner.

The final word in all doubtful cases usually rests with the external examiner. This plan of internal examination holds sway in the English universities and training colleges.¹

The principle involved Thus far we may seem to have been merely describing a piece of administrative machinery.

But, in truth, certain very important questions of principle are involved. Two prime considerations enter into any scheme of examination—first, the securing of justice to every individual candidate, and, secondly, the manner in which the examination reacts upon the teaching. Much of current discussion about examinations keeps the first of these exclusively in view, and ignores the second, although it is difficult to say which is the more important. As to justice to the examinee, it seems obvious that the accidents and chances of examination are at their maximum under the external system, and should be at their minimum under the internal system. The teacher's professional conscience should be a sufficient safeguard against favouritism and its opposite—but vigilance and thoroughness on the part of the external examiner should be taken as a matter of course.

More important from our present point of view, because more subtle in its working, has been the inevitable reaction of a system of examination upon the methods of teaching. The point at issue here is no less than the reasonable freedom of the teacher to give of his best. If an English university teacher has not given of his best, the fault was usually his own, and could not be laid at anyone else's door, because he was usually free to teach in his own way, relatively undisturbed by the fear of what sort of questions an outside examiner was likely to "set." But if a grammar-school teacher was not giving of his best, the fault was not necessarily his at all, because his

¹ An examination conducted by the teachers only, without an external examiner or assessor, may be distinguished as a purely internal examination.

objectives were not always of his own devising. If he had been free, he might have chosen a very different course in literature, or in history, or in mathematics, or in science, and he would then have a real chance of doing his best work. Under these conditions, there was little scope for the teacher's originality, there was little opportunity (at least in the upper forms) of adapting the instruction to local conditions, and there was little encouragement to experiment with new methods. The examination dominated the situation, and external examinations are a tremendously conservative force. They form the "dead hand that tradition places upon all attempts to get out of the rut of established educational custom." Reforms come slowly and painfully, and are rarely conceded until a long and insistent demand has been made by numbers of progressive teachers. Much of the most thorough but least progressive work in English education has been done under the system of external examination in the grammar schools.

We have said that external examinations determine to a great extent the teacher's methods. Not only so, but they dictate the very details of the curriculum. What the pupils learn is determined by an outside and predominantly academic authority—why they learn it is a question which is rarely asked, and never satisfactorily answered. Thus it comes about that a practical home-making girl, or an equally practical and handy boy, or an artistic pupil of either sex, has been compelled to prepare for an examination, and therefore to follow a curriculum, which owes its origin to university entrance requirements. So we have paid lip service to the principle of individuality, but have acted as if the academic type of mind were the only respectable type.

"The New Examiner" And now there comes on the scene
 (1) *Intelligence tests* the advocate of an entirely new kind of
 examination, designed to remedy the
 defects of the old. His criticism of the old is usually levelled

against the external examination at its worst. He pictures the examiner as bent upon ascertaining the amount of information, the quantity of crude fact, with which the teacher has managed to cram the candidate, and he proposes, by means of specially prepared tests of intelligence, to replace or to supplement the ordinary examination test. He claims that by such means he can tell how much of the candidate's success is due to good opportunities, and how much to good brains. Thousands of intelligence tests have been devised. They are used sparingly in England, and freely in America. They may be classified as individual tests, applied only to one child, and therefore requiring much time, and group tests, which can be applied to a large number simultaneously, and therefore expeditiously. They may also be classified according as they do or do not involve the use of language, the latter being useful in testing the intelligence of the feeble-minded, and of small children who cannot read or write.¹ By means of the tests, a measure of a person's intelligence—his intelligence quotient, or briefly his I.Q.—is obtained. This measure is the ratio of the mental to the chronological age. If a child of ten can only do tests which are normally done by children of eight, his I.Q. is $\frac{8}{10}$, or, more conveniently expressed, 80. If he can do tests which are normally hard enough for children of 12, his I.Q. is $\frac{12}{10}$, or, more conveniently expressed, 120. What precisely the I.Q. does measure, and how far it can safely be taken as an accurate indication of intelligence, are questions upon which the doctors differ. One hears stories of undoubtedly able people coming out of these tests only moderately well, and one is disposed to draw comfort from the suggestion that a principle of compensation may be at work, so that a moderate degree of that which the tests measure is atoned for by a higher degree of some other mental attributes connected with temperament and character.

¹ For examples of the great variety of tests that have been devised the reader is referred to the special handbooks. An example of tests involving language is—dog: puppy: cat. . . . An example of a test not involving language is a puzzle of the jig-saw kind.

The claim is made, however, that in all examinations conducted for the purpose of selection, such as those devised for selecting grammar-school pupils, an intelligence test should supplement the usual kind of examination.

The nature of intelligence This claim suggests a few reflections upon what it is that the intelligence tests do really test or measure. Many definitions of intelligence have been offered, but it cannot be said that close agreement has yet been reached. We all know that some people are by nature dull and stupid, and others bright and clever, and we may express the fact by saying that the latter are more intelligent than the former; and from the many discussions of what is meant by intelligence we may perhaps conclude that it means, among other things, ability to adapt oneself to novel situations, ability to perceive relations, and ability to learn. It is further maintained by some psychologists, apparently an increasing number, that there are two factors involved in intelligence, a general factor, which is labelled "g" and a specific factor, which is labelled "s." The general factor, which we all possess, is that which the intelligence tests aim at measuring. It is said to be fairly constant for the same individual, but it varies greatly from one individual to another. The specific factor represents the specific ability peculiar to any particular task, such as linguistic or musical or mathematical ability, and these specific abilities, as is well known, may be very different in the same individual. An individual's score on any one intelligence test is due to these two factors, his general ability, and his special ability for that sort of test. It appears to follow that a variety of tests must be applied to an individual in order to arrive at a trustworthy estimate of his general intelligence. We may add that there is not universal agreement as to the existence of the common factor "g." Some hold, for example, that one's stock of intelligence is made up of a large number of specific abilities, which may or may not be highly correlated. The

point may, however, be regarded at present as of theoretical rather than of practical importance. The intelligence tester goes on with his testing, without waiting for a settlement of this dispute. And, as we have said, he makes the claim, on the face of it admissible, that his results should be taken into account when candidates are being examined with a view to selection.

(2) *Attainment tests* But the more convinced advocates of mental tests would go much further than to supplement ordinary examinations by intelligence tests for purposes of selection. In addition to these tests, which are meant to discover a person's degree of native intelligence, they have also devised educational tests, or tests of attainment, which are meant to estimate a person's knowledge of a subject. They are meant, also, to replace the traditional type of examination, which is described, nay, almost stigmatized, as the "essay type," because an answer to a question usually takes the form of a brief essay. Against this type of examination it is alleged that it places at an undue advantage the pupil who has a literary gift, and, also, that the marking of the answers depends too much upon the mere opinion of the examiner. Questions are, therefore, devised which do not require the examinee to write English at all, and the answers to which, so far from requiring judgment on the part of an experienced examiner, can be marked mechanically by a junior clerk. The examiner's "subjective" judgment disappears and an "objective" and "fool-proof" test takes its place. Among the commoner forms of these tests are the "true-false" test, which requires the candidate to indicate by a mere letter whether a given statement is true or false, the "multiple choice" test, which requires him to signify his choice among several words or statements by striking out the rest, and the "completion" test, which requires him to supply the missing words in an incomplete sentence.

Claims and admissions The advantages claimed for this "new type" examination, as against the orthodox "essay type," are (1) that the answers are quite definitely right or wrong, and cannot form matter of opinion; (2) that the length of time spent in devising the numerous questions is compensated for by the rapidity with which the answers can be marked; (3) that many questions briefly answered make a more comprehensive test than a few answered at length; (4) that favouritism or bias is obviously excluded; (5) that less time spent in writing means more time left for thinking; and (6) that the ignorant, but clever, candidate is prevented from hoodwinking the examiner by gracefully writing round the question without answering it. On the other hand, even the believer in, and defender of, these tests has to admit (1) that they place a premium on knowledge of crude and isolated fact; (2) that they give no opportunity for connected thought about anything; (3) that, whatever the tests may be held to measure, they do not measure the candidate's ability to *use* his knowledge; and (4) that they are open to the well-known objection to all questions that can be answered by "yes," or "no," viz., that they encourage guessing.

Remarks The use of intelligence tests may fairly be said to have got past the stage of preliminary experiment, at least for some purposes. But the use of "educational tests," as substitutes for examinations of the traditional "essay type" has certainly not advanced beyond that stage. All we can do here is to form an estimate of their probable future. Two of the advantages claimed may be brushed aside at once, viz., that they exclude favouritism or bias, and that they exclude the possibility of deceiving the examiner. Such evils hardly exist in a decently conducted examination, and the more responsibility is placed upon teachers, the more surely they will prove worthy of it. It is quite true that the "scoring" of tests is a rapid and automatic process as compared with reading and

assessing short essays, and perhaps this fact accounts, in some measure, for the popularity of tests in the immense schools and colleges of America. Further, the admission that the tests imply no organization of the candidate's thought, and afford no measure of his ability to use his knowledge, is an extremely serious admission. To claim it as a merit that the tests make it superfluous to be able to write clearly and consecutively implies an inadequate view of the relation between thought and expression. Such a claim ought to be confined to young children, whose means of expression are as yet limited to speech and action, and to the mentally defective, who have little connected thought to express.

Conclusions as to educational tests We have seen that a good examination, whatever form it may assume, must satisfy two main conditions. It must provide an adequate gauge of the candidate's knowledge of what he professes to know, and it must provide an incentive to the best kind of study and of intellectual effort. It is to be feared that the more ardent advocates of tests have concentrated upon the first of these conditions, and have generally neglected or ignored the second. Whether they have satisfied, or can satisfy, the first we have seen some reason to doubt. Whether they can satisfy the second there is the gravest possible reason to doubt. To the mind of anyone who weighs carefully the problems connected with examinations, there is ever present the outstanding fact that the mode of examination very largely determines the mode of teaching and of study. If the examination is known to require the candidate to produce long lists of unrelated items of fact or opinion, or to emphasize the unimportant as compared with the essential, or to give mere monosyllabic replies to questions involving complicated issues, then, however high the candidate's "score," he has given no proof of possessing a real knowledge of his subject, and what is worse, he has been encouraged to study on wrong lines

Consider, for example, the following set of questions upon the anthology entitled *Poems of To-day*:

- "1. Who wrote *Friends Beyond*?
2. Name the poem (and author) from which these lines are taken:
 I'm up. Go on. Something meets us
 Heads down into the storm that greets us.
3. Say what are called
 Beautiful comical things,
 Sleeping or curled.
4. Name a sea-poem, and the author.
5. Complete:

Yet I feel

If someone said on Christmas eve
 Come, see . . .

6. Name two poems by Walter de la Mare.
7. Complete by adding the rhymes:
 I shall not me dismay
 That I've grown old and——
 Nor tell-tale glass I——
 That will not wrinkles hide.
8. Say who is speaking in the following:
 Fools! For I also had my hour.
 Say what city is referred to in the following:
 It is 'as if I looked on the still face
 Of a Mother.
10. What is the meaning of Ave Mater, atque vale?"¹

Now, having regard to the limitations necessarily implied in questions which can be answered in a word or two, this set of questions is perhaps as good as any other that could be devised. The point is that a pupil who scored full marks on this test might still be an entire stranger to the beauties of *Poems of To-day*. For the most part, the questions test nothing that is

¹ This example is taken from a recent handbook on the subject

worth testing. Moreover, if this is the test of "progress" to which teacher and pupils are to look forward, they are being directly encouraged to pay tithe of mint, anise, and cummin, and to neglect what really matters. What really matters can be tested, in most cases rather clumsily, by written answers to questions of the despised "essay type," but satisfactorily only by an oral test. Here, however, we come again upon one of the essential weaknesses of the prevailing method of examination.

As a further example, the following test is perhaps of special interest in the present connection. It is meant to be a test of the results of a course of studies in the theory of education, the subject of the present volume

"(The Candidate is required to write T or F against each statement, according as he thinks it true or false.)

1. There is no need to classify children in homogeneous groups, because the brighter pupils will stimulate the duller ones.
2. The I.Q. is a constant.
3. Thinking begins when habit leaves off.
4. Relative values may be determined by discovering those things that are used most frequently or universally in life.
5. The efficiency of school work may in part be measured by the use of educational tests.
6. It is a proved fact that material can be included in the curriculum for its disciplinary value alone.
7. There is less danger of too much drill than of insufficient drill in the teaching of to-day.
8. The organization of subject-matter around problems will ensure efficiency in independent study.
9. Intelligent people discard imagery as soon as possible because it tends to delay thought.
10. Verbal knowledge is useless.
11. Mastery of technique in teaching is less important to the teacher than knowledge of subject-matter."

It is quite true that in the time required to discuss four or five of the above statements, the letter T or F could be affixed to hundreds of them, and, in that sense, much more ground would be covered, and the test would wear the appearance of great thoroughness. But the thoroughness might very easily be in appearance only, for the mental attitude induced by preparation for such tests is the precise opposite of that which is desired by a good lecturer or by a good student. Of nearly all statements like those quoted above it may truly be affirmed that there is something to be said on both sides, and that unqualified agreement or disagreement is not possible for a person who has studied the subject to any purpose. The habit of labelling such statements by snappy and cocksure monosyllables would be subversive of all intelligent study, and this habit would infallibly be formed if this sort of "educational test" became common. The writer remembers an eminent professor in an American college who, in giving a test similar to the one quoted above, took the precaution of requiring his students to say whether each statement was true or false, according to the point of view taken in the course of lectures. This was a wily method of diminishing one of the dangers of the test, but the chief danger, that of failing to encourage sound habits of study, still remained.

It must be conceded that, at any rate with the precaution so taken, a candidate's work on an attainments test can be precisely assessed, whereas the short essay can only be judged by persons whose opinions may differ. Surprising instances are quoted in which a piece of composition has been assessed very variably by equally competent examiners. The probable reason is that they were looking for different things, whereas, when uniformity of judgment is required, they should take care to be looking for the same things. Probably this objection to the examination of the essay type is much overstated, and a heavy weight of evidence could easily be obtained on the other side. But what the advocates of the new style of test seem to overlook

is that the kind of study and preparation encouraged by the traditional examination paper is obviously superior to that which is encouraged by tests which ignore the value of orderly description, reasoned explanation, or in the more advanced stages, sustained argument.

General conclusion We are constrained, then, to regard the attainments test as unlikely, except perhaps in a quite ancillary way, ever to take the place of examinations in English schools and colleges, though they may form a convenient sort of test, for ordinary class-room purposes, of knowledge of crude fact. We have also seen reason to doubt whether the purely external examination, though it has done much to raise the standards of instruction in English schools, has an assured future, even where it now exists. We are therefore left with what we have described as the internal system of examination as the only one which, on strictly educational grounds, is likely to prove permanently acceptable. The external examination, conducted on such an immense scale that it has led to the evolution of a highly specialized technique, which is a mystery except to the competent mathematician, has probably seen its palmiest days, and the time will come when it will no longer seem fantastic to say that "no educational system is possible unless every question directly asked of a pupil at any examination is either framed or modified by the actual teacher of that pupil in that subject. The external assessor may report on the curriculum or on the performance of the pupils, but never should he be allowed to ask the pupil a question which has not been strictly supervised by the actual teacher, or at least inspired by a long conference with him. There are a few exceptions to this rule, but they are exceptions, and could easily be allowed for under the general rule."¹

¹ A. N. Whitehead *The Aims of Education*, p. 7.

REFERENCES

Among fairly recent books and papers on examinations are P. J. Hartog's *Examinations and Their Bearing on National Efficiency*; E. R. Hamilton's *Art of Interrogation*; the Norwood Report, *Secondary School Examinations*; the Crowther Report; 15 to 18, chs. viii and xxvi; C. W. Valentine's *The Reliability of Examinations*; J. L. Brereton's *The Case for Examinations*. In ch. viii of the volume *Towards a New Education* (The New Education Fellowship) a summary of opinion by experts of various nationalities is given.

On the "new type" examination by tests, see *Psychological Tests of Educable Capacity* (H.M. Stationery Office); Cyril Burt, *Mental and Scholastic Tests*; P. Sandiford, *Educational Psychology*, ch. xv (a most convenient summary). See also works by P. B. Ballard, R. Knight, and others.

See also the publications of the International Institute Examinations inquiry, especially *The Marks of Examiners*.

DISCIPLINE

Instruction and training IN the four preceding chapters we have discussed the main problems that arise out of the teacher's work as instructor, i.e. as teacher in the narrower sense of the term, and we have discussed those problems under the heads of curriculum, method, and examinations. We now turn to a different though related set of problems. Every teacher and every inspector or visitor is aware, and is sometimes acutely aware, that the process of instruction, or causing to learn, is accompanied by a personal relationship which, though not perhaps so plain to be seen and heard, is not less real. Besides the problems of instruction, or of teaching in the narrower sense, there are also to be considered the problems implied in such terms as order, discipline, and training, or, more specifically, moral training. These two sets of activities must not, however be regarded as independent of each other. They are intimately connected through the presence or absence of interest. If the effect of the teaching situation is to engender interest, if the measures taken by the teacher are tending to the creation in the pupil's mind of "a many-sided interest," tending, as time goes on, to "a single wide interest," the other aspect of his work and influence will probably, though not necessarily, take care of itself. It takes care of itself in the case of the born teacher, but, as most of us are not born teachers, it frequently happens that a person who "knows his subject" well, and has enlightened ideas about getting his pupil to know it, yet fails, or achieves only a qualified success, because, somehow, he never gets his chance, and this, in common parlance, is because he cannot "keep order."

Can theory help us? The nature of the questions to be dealt with in this chapter is indicated, then, by the commonly used words—order, authority, government, and discipline—words which, however, are not to be taken as of identical meaning. But, it may be asked, is any discussion of these matters likely to have more than a speculative or psychological value? Can it be of any practical use? Can it make a bad disciplinarian into a good one? Can it change a sinister into a benign personal influence? Does it not, in short, belong to the realm of useless theorizing? The answer to these questions is implied in what was said in an earlier chapter about the relations between practice and theory. Whatever can be done to lay bare the causes of success and of failure, and to make clear the kind of success that we ought to be aiming at, should be done, especially for the sake of the young and relatively inexperienced teacher. Here, as elsewhere, however, the only theory worth our troubling about is that which arises out of practice. Whatever theory is propounded in this chapter is based upon experience and observation.

What we are aiming at In training a child, as distinguished from instructing him, what are we aiming at? That is a question which needs to be answered before we can call any training satisfactory or otherwise. We commonly say that the object of instruction is to help to produce a cultivated intellect, and a mind well stored with some of the best that has ever been thought and said. We say, also, that the object of training is to help to produce a cultivated moral nature, a good man or woman, a person who can distinguish truly between right and wrong, and who chooses habitually to do what he knows or believes to be right. A teacher wants to train the children committed to his care so that, as far as his influence goes, they may grow up into honest, truthful, just, and clean-minded men and women. There is no need to resort to a book of ethics for a classified catalogue of all the virtues. A

simple and straightforward statement suffices. It is true that the conception of a good man is not, when we examine it closely, quite so simple as it seemed to Tom Brown's father when he said that all he wanted was that the boy should grow up a brave, honest, and truth-speaking Englishman, or to Arnold when he said that he wanted a Rugby boy to be a Christian gentleman. It is not only that moral ideas and standards vary from country to country and from century to century; they are fluctuating before our very eyes, so much so that in our time the ten commandments have been facetiously, but not quite pointlessly, called the ten suggestions. Still, for practical purposes, it is chiefly questions of "minor morals" that call for casuistical distinctions during the period of childhood and adolescence, and such questions may form the basis of interesting and profitable discussions.¹

Where we start from Such is the aim which any normal teacher or parent has in view in training up a child in the way he should go. We sometimes speak of the process as the building up of character. The metaphor is unfortunate, if it is taken to imply that the teacher or parent is the builder, out of materials passively supplied by the child. The educator's part is rather that of supplying the conditions which may help the child to build up for himself a strong and stable character. The building metaphor, at any rate, suggests the question of foundations. In other words, if the objects of training are as we have just described them, if the goal is the achievement of a certain kind of character, what are the facts of human nature from which we have to take our start? To this question modern psychology provides a clearer answer than has ever been available before. As, on the strictly teaching side of his functions, the educator has to begin with the child's native endowment of intelligence and of memory, and his instinctive tendency to be curious about facts and causes, and to arrange

¹ As for example, in Miss Faithfull's volume, *You and I*.

and to construct, and to bring into some kind of order whatever he may be dealing with; so, on the training side, we have as our data the child's instinctive tendencies in a variety of directions. Among these are to be noted, as specially important from our present point of view, his tendency to seek the companionship of other children, to assert himself among them and to find satisfaction in their submission and deference, and, on the contrary, to yield submission to those who sit in the seats of the mighty and to follow and trust them, to appeal for help when he finds his best efforts to be in vain, to collect and preserve whatever seems to him of value, to flee from danger, to show anger, and to "show fight" when his efforts or desires are thwarted, to protect and comfort the weak and the distressed, and, in due course, to seek a mate of his own kind but of the other sex.¹

Our outfit of instinctive tendencies There is no need to be ashamed of the fact that we share this outfit of instinctive tendencies with the lower animals.

Those common tendencies are the rock from which we were hewn and the pit from which we were dug, and all of us are well aware that we bear the marks of our origin. Civilized man's special and unique gifts—the gifts of superior intelligence, of imagination, of reflective thinking, and of speech—have, in the long slow course of evolution, conferred on him the privilege, to which he does not always rise, of living on a higher plane than that which is occupied by the "brute creation." So far from underrating our instincts, or being ashamed of them, we ought, both for ourselves and for our children, to recognize and understand them. Why, for example, does the young teacher who reads these lines aspire to become a teacher? First, no doubt, because he has a living to get, and

¹ See McDougall's *Character and the Conduct of Life*, ch. ii. To most teachers (and parents) this book will prove more interesting and useful than the author's (or anyone else's) systematic treatises on psychology and ethics.

perhaps a bride to win. But he might do this without becoming a teacher, and so we assume, secondly, that he is fond of boys and likes the idea of watching over and training them. Next, in order that he may do so as efficiently as possible, he is more or less a zealous student of all that may help him to become efficient. In other words, the driving forces behind all he does in this connection are the instinct of self-preservation, the mating instinct, the protective instinct, and the instinct of curiosity. There is much difference of opinion among psychologists regarding human instincts, but no one doubts that a consideration of our instinctive tendencies does help us to explain ourselves to ourselves

*The power of
deliberation
and choice* Not one of these instinctive bases of conduct can in itself be called right or wrong. The idea of morality, of rightness and wrongness, of good and evil, does not arise until there comes a clash between an instinctive desire and those ideals and standards of conduct which it is a prime object of early education to point out and to inculcate. Shall I get up or continue to lie in bed? Shall I keep that half-crown in my pocket or give it to one whose need is greater than mine? Shall I submit to that slight, or resent it? Shall I, or shall I not, drink that additional glass of wine? Shall I, or shall I not, seek pleasurable gratification at another's expense? These are examples of the situations which confront us every day of our lives. Two or more lines of conduct, each with its instinctive urge behind it, present themselves. A period, it may be long or short, of deliberation ensues, and then a choice is made. The choice may be trivial, or it may be momentous; it may be easily made, or it may be a hard-won battle against an almost irresistible habit. It is this power of deliberating and choosing between alternative courses of action which makes the difference between men and animals, and also the difference between a morally cultivated and a morally uncultivated man. It is this

power of free choice¹ that the educator, whether parent or teacher, seeks to influence, so that what is understood to be the right choice shall be made habitually and with as little inner conflict as may be. And it is because of this function of the educator that there arises the problem of what we will here call discipline.

Ambiguity of term "discipline" It is a trite saying, but one which nevertheless bears repetition now and then, that ambiguity in the use of words is one of the chief sources of confused thinking. The word "discipline" is certainly a case in point. In former days, when the mind was conceived of as an assemblage of innate powers or faculties, the teacher's chief concern was often held to be the sharpening of those faculties by means of certain studies, and this process was often spoken of as a mental, or, more strictly, an intellectual discipline. The studies themselves, e.g. the study of classics and mathematics and philosophy, were often, and sometimes still are, referred to as disciplines. In our discussion of the problems of the curriculum we have given some attention to this doctrine of intellectual discipline. But there is another and a much more unfortunate sense in which the word "discipline" is used. As there is an ecclesiastical sense in which discipline means the mortification of the flesh by penance, so there is a pedagogic sense in which discipline has meant merely punishment, including the discipline of the rod. From the point of

¹ The old speculative problem of freedom and determinism, "the great unresolved problem of philosophy," is as irrelevant in a school-room as in a court of justice. Unless he held to an extreme form of indeterminism, a "freedom of indifference," it would hardly matter in practice to a teacher or a magistrate which side he took, if any, in this age-long controversy. Much of the fog that envelops the problem has been created by misleading ways of stating it. The interesting suggestion has been made that a solution may come by applying the principle of relativity. My power of choice is *for me* a fact, as it was for Dr. Johnson, speaking for the ordinary man-in-the-street. But were it given to me to view all my acts of choice *sub specie aeternitatis*, I might see that on no occasion could I have acted otherwise.

view here maintained, this is a sad travesty of what discipline should really mean. The crudity of this conception of discipline may, it is true, be relieved. Discipline may be taken in a somewhat wider sense to mean the subduing or repressing of certain natural inclinations, whether by punishment or by reward. Now it is quite true that the whole educative process includes the restraint of natural inclinations. The trouble arises when this restraint or subdual is regarded as an end in itself, instead of being regarded as a temporary and negative means of realizing a permanent and positive end.

Its best meaning Perhaps the best way to approach the idea of discipline is to connect it with the cognate word "disciple," a word which has become familiar through the gospel narrative, and which probably recalls the gospel story to most readers of this book. In ancient times a teacher had his company of disciples or learners. The Greek philosophers and the Jewish rabbis had their disciples. So also had the Founder of Christianity. In His case the word "disciple" had a double significance, a wider and a narrower. There was the "whole multitude" of those who, without forsaking their usual occupations and their family life, believed in Him and followed Him in the spiritual sense. And then there were the few, the inner circle, the twelve apostles, who were His disciples in a special and a deeper sense. But whether a disciple belonged to the outer multitude or to the inner circle, he was, as a disciple, a free and willing follower and learner. Now this relation of discipleship conveys the idea of discipline at its purest and best, and there is no irreverence in saying that it is often, and might be much oftener, exemplified in a school classroom. Whenever one finds children happily and profitably occupied, owning the mild and unobtrusive and almost unfelt sway of the teacher, but so "keen on the job" in hand that they are hardly aware of the teacher's physical presence, there the spirit of the truest discipline breathes.

And, whether the group of learners or workers be a group of infants, or of adolescents, or of adults, there will usually be an inner circle of those who completely identify themselves with their teacher's aims on their behalf, not because they are afraid to do otherwise, but because of their sense of intellectual or aesthetic fellowship, and there will also be an outer circle of those who do not enter so completely into that fellowship, who "murmur" at the teacher's "hard sayings," and who remind us of those other disciples who "went back, and walked no more with Him." And here our analogy, like most other analogies, begins to break down. For the modern teacher may not be by any means a perfect teacher, and, in any case, he is probably a servant of the community, paid to see that his pupils learn certain things, whether willingly or unwillingly. But all the same, the analogy holds as an ideal ever to be kept in view.

Good order If all teachers were perfect, and if they all worked under perfect conditions, the ideal discipline above described might be the rule instead of being the exception. As things are, the nearest approach to ideal discipline is probably to be found where a first-rate teacher is in charge of young children, and, at the other end of the age scale, in classes for adult students. The reason is the very same in each case. The teacher has been free from the hampering restrictions of the examination system, and the pupils themselves have had a voice in determining the curriculum. The case of adult students is clear enough. "Adult education will thrive only under conditions which allow of the fullest self-determination on the part of the students as regards the studies to be pursued, the choice of the teacher, and the organization of the class." If the teacher, or the system, fails to "deliver the goods" expected by the students, either the class will vanish, or else disorder will break out in the form of unpunctuality, and irregularity of attendance. If the class is

successfully worked under free conditions, no question of order arises. As for young children, let anyone see a group of them at work upon a "project," or upon some occupation the end and aim of which they as well as their teacher are well aware of, some task which does not need to be *made* interesting by artificial means because the examiner may ask a question about it, but which *is* interesting because it meets a felt need, and he will see the spirit of the adult class repeated. The question of order does not arise. A close approximation to perfect discipline prevails.

So, also, does it often prevail in groups or classes of older children and of adolescents. But the difficulties are greater for reasons which have been implied above. We need not take the extreme case of the healthy boy who obviously and intelligibly prefers football to algebra, or cricket to chemistry. We may take the more relevant case of the boy who, in old-fashioned phrase, has "no genius" for algebra or chemistry, at least as those subjects usually have to be taught for examination purposes, but has a genius for geography or history or craft work. The boy dislikes algebra, and makes little progress in it; but the teacher knows—and perhaps later on the boy himself will realize more fully—that the examination lies ahead. This is but one instance out of scores that might be cited in which a state of tension is set up between master and boy, which often excludes the possibility of willing and intelligent discipleship—and we are here speaking of a boy who is no "juvenile delinquent," and of a master who is not easily angered or baffled. The game of cross purposes may even go so far that both master and boy look forward to the time when the latter will make his final exit. The causes of tension and cross purposes between master and boy are many and various; and the young teacher who reads these lines might do worse than make a list of those causes which his own experience and observation as a schoolboy showed to be at work. The broad fact is that in this imperfect world perfect discipleship is not always possible.

Question of corporal punishment What then is to be done? Fifty years ago there was little or no doubt as to what should be done. Many a master of an elementary school did not regard himself as fully equipped for his day's work unless he had at hand, not only a piece of chalk and a duster, but also a cane. Times have changed, and the cane has either disappeared entirely, or is hidden from sight until real or supposed necessity arises for its production. An experienced official has explained the disappearance of the cane as the result of the introduction of games and sports, school plays and concerts, school magazines, school excursions and school camps. By these means, he says, the children's attitude has been changed, because they have learned in practice what organization and leadership and obedience mean.¹ This explanation is correct so far as it goes, but it is incomplete. It omits the cardinal and incontestable fact that during the period when grants were made on the results of annual examinations, there was often more corporal punishment inflicted in a school in one day than would now be inflicted in the same school in twelve months. Under the rigid examination system the teacher was necessarily a despot, and the children were his minions. The fundamental change that has taken place is that the new freedom has made possible the exorcism of the spirit of slavery, and the substitution of the spirit of comradeship and discipleship. Plays, concerts, magazines, camps, and all that makes school a great piece of team work, in which the teacher figures as supervisor, and as a director who does no more directing than is unavoidable—all these things follow from a more subtle and deep-lying change.

The case of the higher schools does not differ in principle. The rigidly uniform and predominantly linguistic curriculum of the old grammar schools has disappeared. Instead of the boy having to fit himself somehow to the school, or else receive a flogging, the school takes some trouble to fit itself to the boy,

¹ Bolton King, *Schools of To-day*, p. 72.

and although the external examination may still hold sway, its incidence is not markedly felt until the boy is mature enough to make common cause with his teacher against their common foe, the examiner, and so the spirit of combat may pervade the classroom as well as the playing-field. Comparative freedom in teaching has brought with it a friendliness between masters and boys, with "partnership in games and hobbies," which places a gulf between the old discipline and the new.¹ In schools of all kinds, the frequent infliction of corporal punishment is a thing of the past.

Other means of external control But although the atmosphere of the school has been so far transformed that the hard and sometimes brutal expedient of corporal castigation is far less frequent, even in the management of boys, yet disciplinary difficulties do arise, for if a clash of motive between teacher and taught is no longer inevitable, a clash of temperament is still common enough. The difficulty is partly met by minor punishments, such as detention and loss of conduct marks. It is also met by minor rewards of a corresponding nature. The admission must be made, however, that the more these external means of maintaining order are employed, the more certain it becomes that the moral atmosphere of the school is unhealthy. There are some teachers who overcome all their difficulties by what is sometimes called their strength of personality. The writer well remembers, for example, a man gifted with a dark complexion, a heavy black moustache, a pair of dark piercing eyes, and an occasionally stentorian voice, who could as easily control a hundred boys as ten. He well remembers another man who ruled, not literally with a rod of iron, but with an equally potent instrument, a stingingly sarcastic tongue. Now

¹ See the introduction to *Harrow Lectures on Education* (1931) for a striking confirmation of this statement, even with reference to the English "public" schools, where traditions and customs die hard.

we must not draw from these instances the lame conclusion that there is no room in the teaching profession, nor among parents and guardians, for strong personalities. The circumstances under which these men taught, including large classes and impending examinations, constituted an hourly temptation to use their giants' strength tyrannically, and continually to remain in the limelight. The great difference in the modern classroom is that these conditions have been so substantially changed that the temptation to autocratic control has been largely removed. The same change that has wrought good in the sphere of instruction has wrought good in the sphere of order and discipline. The teacher-centred school has become to a greater extent the child-centred school.

"Free discipline" We can now perhaps see our way to a true explanation of the oft-used but much-misunderstood expression "free discipline." To some people the expression is simply self-contradictory. How, they ask, can you have order, which is the object of discipline, if children are to be free to do as they please? The stringent disciplinarian quotes with approval the saying that order is heaven's first law, and the lax disciplinarian quotes against him all the nice things that were ever said about the sacredness of individual freedom. Both are right and both are wrong. Both the men referred to on p. 187 secured order, but it was that external sort of order that made good feeling and really good work impossible. They made a desert and called it peace, as strong-minded people often do, whether in the school or in the home. Thus the principle of order may be gravely misunderstood and misapplied. On the other hand, the freedom which is licence, the freedom which makes itself a nuisance by ignoring other people's rights to the same freedom, is again a misunderstanding and a misapplication of the principle professed. Order and freedom are both secured in the schoolroom when the teacher is neither a despot nor a cipher, but a leader and a

comrade in a quest for which, if the material of the curriculum be wisely chosen, and if the teacher's attitude be friendly and sincere, the pupil's instinctive curiosity is a stimulus which rarely fails. So far from being a contradiction in terms, free discipline is a fact which may be observed any day in every type of educational institution, from an infant school to a university. Its absence is a sure indication that there is something amiss, either in the teacher, or in the conditions under which he works.

The discipline of girls In most of what is written about discipline it is assumed that the unruly elements in human nature are stronger in boys than in girls, and that, therefore, the problems of discipline are less insistent in the teaching of girls than in the teaching of boys. This is a point upon which the opinion of teachers in mixed schools, though not entirely conclusive, is of special value. And the best opinion seems to be that discipline in a mixed school is not essentially different from discipline in a single-sex school of a good modern type—i.e. a school in which the old repressive discipline, with its public reproofs and frequent castigations, has given place to a discipline which comes from within and is largely self-imposed. The weakness of what has been called the "tariff system" of discipline, the system that imposes a definite penalty for every sort of offence, is seen most clearly in a mixed school. "For boys and girls differ in their temperaments and therefore in their sensibility to punishment. Punishments which are equal objectively may be utterly unequal subjectively. Girls, as a rule, are sensitive to reproof; a little more than mere reproof is needed before some boys consider that a teacher is really serious. The boy may, therefore, need rather more severe treatment than the girl. But then there are some girls too who need severe (or stern) treatment, just as there are others, more highly strung, for whom it would be totally wrong. Boys and girls differ so widely among themselves that it

would be a mistake to stereotype two sorts of discipline, one for boys and one for girls. What is necessary is that children (whether boys or girls) should be treated as individuals.”¹

¹ B. A. Howard, *The Mixed School*, p. 190.

REFERENCES

In his volume *The Changing School*, P. B. Ballard brings his wealth of experience and learning to bear upon some of the problems of this chapter—see especially his chapters on punishment, the discipline of natural consequences, and freedom. See also my *Principles of Education*, ch. xvii. One of the most original books on the general subject of discipline is E. Holmes’s *What Is and What Might Be*, with its pointed contrast between “the path of mechanical obedience,” and “the path of self-realization.” The radical view of freedom in the school is represented by N. MacMunn’s *The Child’s Path to Freedom*. The more conservative view is taken by C. Norwood in *The English Tradition of Education*, ch. vi, *et passim*. On Free Discipline, see J. Adams, *Modern Developments in Educational Practice*, ch. xii. But see also T. P. Nunn, *Education, its Data and First Principles*, ch. xv; A. G. and E. H. Hughes, *Education: Some Fundamental Problems*.

THE SCHOOL COMMUNITY

The sympathy of numbers In the preceding chapter we found it impossible to discuss discipline as a matter merely between a teacher and an individual pupil. The pupil is a member of a group, and perhaps of several groups. He is also a member of the whole school community. These facts have a vital bearing upon problems of instruction, as we have already seen, and they have a bearing no less vital on the problems of conduct and discipline. Only in the exceptional case of the single private pupil, or in the case, not so exceptional as it used to be, of the single child in the home, is this social element in training eliminated, and there only temporarily. So important and universal is the social situation in everyone's upbringing in home and in school and perhaps in college, that it demands special consideration here. So far as the school is concerned, a sort of psychology of the group, rough and ready it may be, is no new thing. The difference between the work of a private tutor with his one pupil, and a school teacher with his one, two or three or four dozen, has long been recognized as an infinite difference, and the opinion has been hazarded that the group spirit is not fully attainable if the number falls below a dozen, which may perhaps be regarded as the desirable lower limit. The upper limit of a class group involves many considerations which are dealt with in other parts of this book. The group spirit, the "sympathy of numbers" as it has been called, is a good thing, but like other good things it can be carried to excess. The phrase "sympathy of numbers" is due to David Stow of Glasgow, who in the 1850's waged war against the monitorial system, with its small classes and its child teachers, and advocated the large class with

the adult teacher. Far from seeing any difficulty in conducting a "gallery lesson" with eighty children, he thought that situation just right. He spoke (he thought convincingly) of the difference it made to a clergyman whether his church were crowded or half-empty. In fact, like many another since his time, Stow was imperfectly aware of the difference between preaching and teaching. Still, he was right up to a point, and we owe to him the happy phrase quoted above.

An example What Stow called the sympathy of numbers comes under the head of what the modern psychologist calls the gregarious instinct. It is seen in all forms of community life, including that of the school, though it does not, as has been mistakenly supposed, account completely for every form of social relation and influence. In educational institutions the gregarious or herd instinct is always present and, like every other instinct, needs both to be used and to be kept within bounds. Many years ago, the present writer took part in bringing into existence a large two-year training college of five hundred students. With the exception of the natural differences between men and women, the students were of uniform type, closely resembling one another in respect of age, early environment, and educational opportunities. Not only were they of similar antecedents, but their general aims and outlook were precisely similar; they all meant to become teachers in the same kind of schools. Also, according to the prevalent ideals of the time, they all pursued exactly the same courses of study, and, the courses being numerous, pursued each of them to exactly the same elementary stage. The cumulative effect of all these uniformities was to produce an almost perfect example of a psychological crowd—a number of persons whose thoughts are all turned, or may at any moment be turned, in precisely the same direction. The conditions were therefore present for exhibiting the psychological characteristics of a crowd. On comparatively small occasions—

though not so often as if it had been an ignorant crowd—the student-body could become excited, irritable, credulous, and suggestible; in short, the ordered community tended now and then to become a mob, though always meaning the utmost loyalty to the college. The college authorities felt that *esprit de corps* was a good thing, but they felt also that you could have too much of a good thing. Their problem was that of breaking up the uniformity, with the double object of encouraging individual abilities, and of moderating the primary loyalty to the college by means of secondary loyalties to smaller groups. This they did by introducing optional and advanced courses, by introducing third-year and “refresher” courses, by offering one-year courses to experienced teachers, by developing the hostel system to the utmost possible extent, and by investing strong and trusted leaders with much responsibility. The old *esprit de corps* was conserved and cultivated in the general assembly hall, but the old uniformity was replaced by a moderating diversity elsewhere. This instance, drawn from actual experience, exemplifies at once the value and the peculiar dangers of the community spirit.

The institution as a whole In certain respects the instance given above is an exaggerated one. An institution in which the students normally remain for only two years tends to breed a community spirit possessing peculiar characteristics, which make it a relatively difficult problem for the authorities and leaders. A college in which the students remain for three or four years, or a school in which the pupils remain for five to seven or eight years, is in a much more advantageous position for cultivating a healthy community spirit, because of the many divisions and cross-divisions for purposes of instruction, games, and residence; and because the seniority of the older students or pupils is a real seniority, readily acknowledged by the younger ones. The divisions may be so numerous and deep, especially in large schools, that the

insistent problem is not that of a community spirit which is too strong, but that of a community spirit which needs tending in order to keep it alive. The chief agency for keeping it alive is the daily, or at any rate the frequent, assembly, whether in the school hall or the school chapel, and the feeling of oneness, the sense of belonging to a great whole which includes past as well as present members of the school, is intensified by a common act of worship, so arranged that, with only an exception here and there, all may join without offended consciences. The community spirit is reinforced also by those occasions—occasions so disparate as cricket matches and prize distributions—on which the school society emerges from its seclusion and faces the outside world. Loyalty to an old school, emphasized now and then by the hearty singing of an old school song which tells of “forty years on,” is one of the finest of loyalties.

The size of a school It is only in comparatively recent years (since the 1890's) that psychologists have turned their attention to the psychology of the group or herd, as distinguished from the psychology of the individual, and although they have laid the foundations of a social psychology, they have perhaps raised more problems than they have so far solved. The largest group with which we are here concerned is the total membership, past and present, of a school or a college. If the institution be of ancient origin, this group becomes a company which no man can number. Obviously it exists only as an idea, but it is an idea round which there may cling powerful and elevating emotions. In fact, loyalty to an old school, and in its degree to a young one also, is a good example of what the psychologist calls a sentiment. Next in order, and more germane to the purpose of this chapter, is the concrete group of which the present school consists. It may be a small group or a large one. Omitting the case of the tiny rural school, it may consist of a few-score pupils, or, in

America at least, it may consist of several thousands. The "optimum maximum" is an old puzzle, no solution of which is in sight because so much depends upon matters upon which opinions differ. Thring thought three hundred enough, but then Thring was a masterful man, who deemed it the business of a headmaster to know every boy in the school, and to know him well, and who therefore was unwilling to practise sufficiently the art of delegation. On the other hand, it may be doubted whether any school should be so large that its head ceases to be a teacher, and becomes a distant figure, combining some of the characteristics of a priest with some of those of an administrative officer. In any case the school, whether large or small, is divided into groups for teaching purposes. The ideal number in such a group, again, cannot be stated simply and without qualification, as we are about to see.

The size of a class There is a well-known saying, worthy of all acceptance, that talking is not teaching. Still, notwithstanding all that may be said about silent individual work, oral instruction must always retain a place among the teacher's resources. There is a certain type of lesson, it may be in history or in literature or in science or in art or in music, the purpose of which is to inspire, to kindle interest and enthusiasm, and to provide a motive for further study. Such a lesson may be given to a large class with advantage, because a large group of listeners is favourable to the atmosphere which the teacher is trying to create. A teacher who is even moderately gifted as a public speaker may on such an occasion do a good stroke of business for the school. But such occasions would lose most of their value if they became common. A brief season on the mountain-tops now and then is a refreshing experience. But the intellectual life, like the physical, needs solid nutriment. We have to come down to the ordinary work of the schoolroom—work which, though it may still be full of interest, may be less exciting. Most experienced teachers would

agree that for lessons of this type, a class should not exceed five-and-thirty, and that, if the group spirit is to be a reality, it should not be less than a dozen.

The "house" system But a well-organized school is grouped for other purposes besides instruction. Notably it is grouped also for games and sports. In a large boarding school, where the pupils live in "houses," a natural and convenient grouping at once presents itself for this purpose, and it is to the great boarding schools that English education at large is supremely indebted at this point. The adaptation of the "house" system to the circumstances of a day school, whether for boys or for girls, is a marked feature in the development of secondary education in England since the beginning of the present century.

Boarding schools The fact that the house system originated in the great boarding schools, and that from them the idea has found its way, more or less, into day schools of all kinds, is only one aspect of the greater fact that, from the nature of the case, it is in the boarding schools that the community spirit is seen in its full strength. And since the benign working of a strong community spirit depends much upon leadership, the prominent leaders among the pupils themselves constitute a factor of the greatest importance in such a school. Thomas Arnold has shared the common fate of the great Victorians in being taken down from his exalted pedestal, and in having his foibles as well as his virtues made plain to be seen. No doubt the official biographies presented pictures that were far too good to be entirely true. But when iconoclasm has done its worst, it appears to remain true of Arnold that he did a great work in fortifying the system which brings the best elements in the school definitely on the side of law and order. It may also be true of him that he was essentially an autocrat, who placed his prefects in the position of autocrats in their

own spheres. But fortunately the spirit of autocracy was not an essential part of the plan, and a milder form of self-government has gradually taken its place.

The strength of the community spirit in the boarding school is seen also in the force of public opinion, of settled usages, of what does and does not constitute "good form," of what is and what is not "done." Obviously this characteristic has its good side, but it is said to descend sometimes into petty detail, and to leave insufficient room for the play of individuality. In the case of the public schools of England, the force of tradition undoubtedly tends to produce men of an easily recognizable type—a type upon which so high a value is set that the municipal day schools, as we have seen, tend to model themselves in some respects upon the public schools, but not in respect of the system of "fagging," which in milder forms than of yore still exists in the great boarding schools, and is still warmly defended by many who have learned by experience exactly what it means.

Growth of the group spirit It is interesting to observe that the community spirit, which is seen in full operation in a residential school for adolescents, has its basis in the facts of human nature, and is therefore a matter of gradual development. What the psychologists call the gregarious instinct may easily be misunderstood, but there can be no question that it exists. From early childhood we all dislike to be left alone, and this primitive dislike of being left alone is the beginning of the community spirit. But one only has to watch a nursery-school class for a short time, in order to see that, although children of three or four enjoy *being* together, they have as yet little idea of *playing* together. It is not until his sixth year that the child begins to feel the stirrings of the social spirit. Up to that point he has been a stout individualist, and has displayed positively anti-social tendencies, except towards adults. In his eighth year he becomes less dependent on the society of parents and nurses and older folk generally, and seeks

the companionship and co-operation of children of his own age.¹

Under wise management the further development of the social spirit, right on into adolescence, will be taken into full account in all educational arrangements. The psychological basis of the school as a social organization, and indeed more generally of society at large, used to be regarded as unconscious imitation. And this is so far true that we all tend, especially in the days of our youth, to imitate others, and in particular to imitate people whom we admire. But this is not all. The social spirit includes opposition just as much as imitation. Social opposition is seen clearly exemplified in games with their element of contest, in the give-and-take of conversation, and in the attack and defence of more formal discussion. Its effects are seen in the difference between the self-taught man and the college man, the latter of whom has learned to take hard knocks, to be a good loser, and a good "mixer." And when the social spirit, with its amalgam of imitation and opposition, of sympathy and competition, is not strongly in evidence, as it is said not to be in some of our day schools, the danger arises lest the product of the training should become a self-centred person, intent on his own advancement, and never having learnt in practice what is implied in the saying that we are members of one another.² The cultivation of the social spirit, the team spirit, the spirit of co-operation in work and in play, is easier in the boarding school than in the day school, but that it can be successfully cultivated in the latter there are many examples to prove.

Leadership Bound up with the problems discussed in this chapter and the last is that of leadership in the school community. In the "old days" there was no such problem. For one thing schools were then small as compared

¹ See E. and M. Kenwick, *The Child Between Five and Ten*, Pt. II. ch. iii.

² See O. A. Wheeler, *Youth*, pp. 54-5.

with modern schools, and for another thing it did not enter into the calculations of the old-fashioned schoolmaster to delegate authority or to share responsibility. He preferred a strict autocracy. And in a sense it is true that the teacher of a class, or the headmaster of a school, must be the undisputed leader in his own sphere. He may disguise his leadership and call himself an adviser, but normally his leadership and his authority must be there, or chaos may be the result. The difference between the old and the new schoolmaster is that the latter does not find it either necessary or desirable to keep his authority constantly in evidence. It is taken for granted rather than asserted. Moreover, he regards the delegation of authority not only as a convenience to himself, but also as a valuable means of training for others. To whom, and to what extent, authority should be delegated are questions to which no dogmatic reply can properly be given. If the system of government is to be a real success, it seems obvious that the pupils themselves should have a voice in the election of prefects or monitors. And this will mean that the strongest personalities, who are not always the most intellectually gifted, will be brought to the front. The great thing in a healthy school society is to get such boys (or girls) on the side of rational and sensible behaviour.

REFERENCES

The references at the end of Chapter X are mostly appropriate here also. In addition, see J. Adams, *Modern Developments*, ch. v; T. Raymont, *Principles of Education*, ch. xix; J. H. Simpson, *An Adventure in Education*.

On group psychology, see W. McDougall, *The Group Mind*; J. Drever, *Introduction to Psychology of Education*, ch. xi; Marjorie Reeves, *Growing up in a Modern Society*; A. K. C. Ottaway, *Education and Society*.

CHAPTER XII

THE TEACHER

Former estimates of the teacher IN a speech delivered in the year 1828, Lord Brougham, a powerful though erratic

educational leader in his day, made the statement, often repeated since; "Let the soldier be abroad if he will; he can do nothing in this age. There is another personage abroad. The schoolmaster is abroad; and I trust to him, armed with his primer, against the soldier in full military array." Lord Brougham was both right and wrong. The hundred years and more which have elapsed since these words were spoken have provided plenty of work for the soldier, and plenty also for the schoolmaster, who, by the way, no longer relies upon his primer, any more than the soldier relies upon his blunderbuss. In Brougham's time, a competent teacher was a rare bird; a century later there could hardly have been fewer than a quarter of a million qualified teachers in England alone. During the period of this remarkable growth of his kind, the teacher had to endure many hard knocks. Even so stout a reformer as William Cobbett, writing at the time when the first tiny grant of public money was made for the purpose of building schools, expressed his disbelief in this new ardour for education, partly on the ground that its extension would merely increase the number of "that new race of idlers," schoolmasters and schoolmistresses. Later on, Dickens satirized schoolmasters, sometimes mercilessly and undeservedly, although his descriptions of Bradley Headstone and Miss Peecher probably convey an excellent picture of the mid-Victorian school-teacher, as turned out by the normal schools at that time.¹ And a more recent and an equally relentless

¹ *Our Mutual Friend* (1864).

critic of modes and manners, Mr. Bernard Shaw, is credited with the saying that "he who can, does; he who can not, teaches."¹ The teacher may comfort himself with the thought that similarly shrewd thrusts have been aimed at the doctor, the lawyer, and the clergyman—not to speak of the plumber.

Teaching as anybody's job England took a longer time than some other countries to make up her mind that teaching is not anybody's job. Only so long ago as 1861, a Royal Commission, reporting on the state of elementary education, quoted the assistant commissioners' descriptions of what they had actually found in the "schools for the people" which they had visited. The report on the London schools, which is of a piece with all the rest, stated: "None are too old, too poor, too sickly, too unqualified in any or every way, to regard themselves, and to be regarded by others, as unfit for school-keeping. . . . Domestic servants out of place, discharged barmaids, vendors of toys or lollipops, keepers of small eating-houses, of mangles . . . needlewomen who take in plain or slop work . . . consumptive patients in an advanced stage; cripples almost bedridden; persons of at least doubtful temperance; men and women of 70 or even 80 years of age; persons who spell badly (mostly women I grieve to say), who can scarcely write, and who cannot cipher at all."

Such were the possibilities of the teaching office as late as the 1860's. When the Act of 1870 was passed, permitting school boards to compel the attendance at school of children between four and thirteen, and aiming at the provision of "a school place for every child in the land," a beginning was made of squeezing out of existence the dismally inefficient dame schools and other private schools. But it is to be noted that the Act of 1870, whilst it multiplied elementary schools, did

¹ It is true that this saying refers to the person who "takes pupils" after failing as an artist, not to the ordinary teacher. But if anyone is in doubt as to Shaw's opinion of ordinary teachers, he had better try the Preface to *Misalliance*.

absolutely nothing to improve the education and training of teachers. It was assumed, entirely without reason, that the means thus far adopted for recruiting the ranks of the teachers were sufficient. A brief account of those means will help to explain some features of the elementary-school system of England which persisted to very recent times.

An early experiment; the child as teacher Early in the nineteenth century, the bright idea had occurred to certain persons that children were the right people to teach children; that children who knew a little should be employed to teach others who knew a little less. With this movement, the names of Joseph Lancaster and Andrew Bell are inseparably associated. The monitorial system was obviously cheap, but its defenders seriously contended that it was also psychologically sound. What really and inevitably happened was that the instruction conveyed by the master through his monitors was a purely mechanical memorizing of spellings and tables and the like. In its mechanization of instruction, the school resembled a factory, and indeed some of the metaphors used to describe it prove that the analogy is not fanciful. "In a school," cried the infatuated Bell, "it gives to the master the hundred eyes of Argus, the hundred hands of Briareus, and the wings of Mercury. . . . By multiplying monitors at pleasure, it gives to him indefinite powers, and enables him to instruct as many pupils as any school will contain. . . . With great propriety it has been called the steam-engine in the moral world. . . . In a word, it is the lever of Archimedes, transferred from matter to mind."¹ Lancaster and Bell believed, and made others believe, that (in Bell's words) "there is a faculty inherent in the mind of conveying and receiving mutual instruction," and this "faculty," as natural as breathing, was made the basis of the system. Such was the first short and easy method of providing a corps of

¹ Bell, *An Experiment in Education* (1797).

teachers. Its real significance lies of course in its dire prevision of universal schooling at a time when there were absolutely no means of obtaining adult teachers.

Teaching as a skilled craft; the adolescent as teacher The monitorial system was in full swing in the elementary schools of England (the old British and National Schools) during the first half of the nineteenth century. Its method involved mechanical memorizing by means of endless repetition in chorus. But, as our little systems do not cease to be as soon as they have had their day, mechanical repetition long outlasted the monitorial system. Fifty years after the system apparently ceased to be, the wailing chorus of the elementary school smote the ears of the passer-by. Our immediate concern, however, is with the next step in the evolution of a teaching profession on a national scale. The first secretary of the first government department of education in England, Sir James' Kay-Shuttleworth, was wise enough to see that the schools were losing the monitors just at the time when they began to be useful, and he was energetic enough to provide an effective remedy. Just as a boy might be apprenticed to a carpenter, or a girl to a dressmaker, why should not a boy or girl of thirteen be apprenticed to the master or mistress of a school, and learn the mystery and craft of school-keeping? Thus arose that eminently practical, business-like Victorian and English solution of the problem—the pupil-teacher system, racy of the soil. The children of the country, instead of being taught by children, were, during the rest of the century, largely taught by adolescents, under the supervision of a master or mistress. Teaching, at any rate in the public elementary schools, was no longer anybody's job. It had advanced to the dignity of a trade or skilled craft. It was precisely comparable with joinery and millinery, and required precisely the same kind of early training. At a time when classes were large, and elementary education was mostly under-

stood in terms of the three r's, it was obvious that the tricks of the trade should be picked up betimes. Matthew Arnold was quite right. The pupil-teacher was the backbone of the system. But the system was doomed to gradual extinction, and the pupil-teacher along with it.

The older training colleges The wisdom of Kay-Shuttleworth went beyond that characteristically English product, the pupil-teacher system, which began to function in the year 1847. Already there existed certain "normal schools" in which young men and women might learn the art of conducting a school on monitorial lines, and it was part of his plan to reform and extend those institutions, so that the most promising pupil-teachers might receive three years' training, a period soon cut down to two years. Unlike pupil-teachership, the normal school was not peculiarly English. For example, the first public normal school in America was opened at Lexington in 1839, and the development of normal schools in that country presents an interesting parallel to the same movement in England. But the special feature of the English normal school, or training college as it came to be called later, was that the practical training, such as it was, had already been accomplished during the pupil-teachership. The task of the training colleges was partly to round off and complete this training, but chiefly to make up the arrears of general education; in fact to give a rather poor and a belated course of what we now know as secondary instruction. Kay-Shuttleworth did the very best thing that could be done in the circumstances. The older universities were still in their unreformed condition, the modern universities were either in their infancy or were not yet born, and secondary education was represented by the old grammar schools, which were inaccessible, and, in any case, were quite useless for his purpose. Nothing was possible except a closed system in which a person passed from the status of scholar to

pupil-teacher in an elementary school, thence to a training-college for elementary-school teachers only, and thence back again to the elementary school as a teacher. At his best such a teacher was, within his limits, a model of efficiency; at his worst he was narrow, conceited, and cocksure. Frederick Temple, a principal of a training college and an inspector of schools between 1854 and 1857, was justified in saying of him that what he needed was less knowledge and more education.

Teaching as a profession During the forty years from 1850 to 1890, English elementary schools were thus staffed by means of pupil-teachers, uncertificated teachers, untrained certificated teachers, and certificated teachers who had been trained at one of the colleges above referred to. These last were, of course, the *élite* of the teaching body, and they may be said to have formed the beginning of a teaching profession in this country, if a profession is satisfactorily defined as "an occupation based upon specialized intellectual study and training, the purpose of which is to supply skilled service, or advice to others, for a definite fee or salary."¹ The trouble with the teaching profession at this time was that, unlike the old professions of divinity, law, and physic, and unlike newly recognized professions, such as dentistry, architecture, and accountancy, its programme began with an early apprenticeship based upon empiricism, and postponed the "specialized intellectual study" until the dawn of manhood or womanhood. A new spirit was breathed into the training colleges by the university training departments, which took their rise in 1890. For the first time, young teachers were given the opportunity of coming into contact with teachers of ripe scholarship, and with fellow-students of varying aims in life. But it was the rise and expansion of a secondary-school system that followed the Act of 1902 that finally made a genuine

¹ See A. M. Carr-Saunders's pamphlet on *Professions, their Organization and Place in Society*, p. 5.

teaching profession possible. Intending teachers could now receive a general education until the age of seventeen or eighteen, and then pass on to college for their specialized training, first in the subjects they hoped to teach, and then in the best methods of teaching them. The change soon wrought in the elementary branch of the teaching profession by the expansion of the secondary-school system was little short of miraculous. Difficulties remained, such as the opportunities of boys and girls in rural districts, but there could be no turning back. Teaching definitely took its place as one of the professions in the full sense of the term.

Training in teaching We have just seen that a teacher's specialized preparation for his calling consists broadly of a study (*a*) of what he intends to teach, and (*b*) of the best methods of teaching. This point needs, however, some further explanation. In general, it may be said that the importance of (*b*) varies inversely as the age of the pupils whom the intending teacher has in view. If a girl intends to teach in an infant school or a kindergarten, (*b*) becomes so important that the distinction between (*a*) and (*b*) tends to disappear, i.e. such subjects as nature-study, elementary mathematics, literature, tend to be studied pretty strictly in the light of the fact that they are to be taught to children. The same principle is largely applicable in the preparation of teachers for the primary schools, and it is partly for that reason that the value of (*b*) has never been doubted for primary teachers. The opinion is widely held, however, that the intending primary teacher should carry at least one subject to a more advanced stage, not necessarily with a view to specialized teaching, but rather with a view to personal culture. The value of (*b*) for a secondary teacher has been much more slowly recognized, especially on the men's side of the profession. A sound knowledge of the matter to be taught, and a general liking for boys, used to be held sufficient; but more

enlightened views on the value of (*b*) are gradually gaining ground. In the case of the university teacher, the necessity, or even the desirability, of (*b*) is not seriously entertained, although it is well known that university teachers of large classes are sometimes ineffective. We come back, however, to our statement that the importance of (*b*) becomes less and less as we proceed from the teacher of small children to the teacher of adults; for the very good reason that the adult student knows what he wants, and chiefly needs suggestion and general guidance from a competent authority.

The teacher's personality People who disbelieve in the necessity of training teachers, and who therefore have small faith in the work of training colleges as such, usually base their position upon the teacher's personality. Given the right personality, training is superfluous; given the wrong personality, training is useless. So runs the argument. In examining it, let us be clear about the use of terms. In common speech, the terms "character," "individuality," and "personality" are apt to be used almost interchangeably, so that if we put the adjective "strong" or "weak" before them, the expressions mean just the same thing. If, however, we pick our words more carefully we make distinctions. When we speak thus of a person's character, the reference is to his moral standing; when we speak of his individuality, we refer to qualities which make him specifically different from, although generically similar to, other persons; and when we speak of his personality, we refer to him as a social force. Thus, a person may be of high character and marked individuality, and yet may be the kind of person who could never make, for example, a good salesman or politician, because he fails to impress people: or, as we say, he lacks social force; he has no personality or a weak personality; with all his merits he "doesn't put it across." Obviously then a really weak personality is a fatal disqualification for teaching—at any rate for school

teaching. On the other hand, a markedly strong personality has been held to disqualify because of its tendency to dominate the classroom situation, to the detriment of the children; but this danger is removable if the teacher is alive to the importance of cultivating personality and individuality in his pupils.

A consideration of the teacher's personality does not weaken, but greatly strengthens, the case for the training of the teacher. A good course of training includes a psychological analysis of what we have called the classroom situation. Faults of personality, whether on the side of weakness or of strength, are usually remediable. The great thing is that the young teacher should be led to realize the dangers into which he or she is apt to fall. A well-trained teacher, would, for example, be forearmed against the unhealthy form of admiration known in girls' schools as g.p's. She knows, as a matter of cold psychological analysis, that children are apt to imitate spontaneously people whom they admire, and that the imitation may descend to ridiculously trifling details; she knows also that some children are readily open to "suggestion," which is a sort of mild hypnotism. This knowledge will tend to exalt her sense of responsibility towards children, and should also tend to induce in her a sense of humility that may be much needed. It is the teacher who has never been led to face the psychological situation resulting from her strong personality who constitutes the greatest danger in a school.

Teachers' organizations We have seen how a teaching profession has emerged, or at least is emerging, in England; and the next point to be noted is that it shares with all other definite professions the inevitable tendency to organize itself for the furtherance of its purposes and its interests. A brief account of teachers' organizations in England may help to throw light upon the English system of education in general. Such organizations fall broadly into three classes: (1) those which have for their object, or at least

an important part of their object, the protection of the interests of their members, including the interests of the particular types of schools which they represent; (2) those which have as their object disinterested investigation of educational problems of a general character; and (3) those which have as their object improved teaching in special branches of school curricula. To deal in detail with the whole subject of teachers' organizations would not be in keeping with the scope of the present volume, but some reference to their main features seems desirable.

(a) *For promotion of professional interests* By far the most prominent among the first group is the National Union of Teachers, founded in 1870 as the National Union of Elementary Teachers. This large organization seeks to combine all qualified teachers into one body. Its members were mostly from the schools formerly called "elementary," although, with the increase in the number of grammar schools after the 1902 Education Act, many teachers from these schools also joined. The "N.U.T.," as the organization is familiarly known, admits men and women to membership and to all offices on precisely equal terms. Sectional interests have, however, led to the formation of other associations. The National Association of Schoolmasters, on the other hand, is in favour of separate consideration for men teachers. Equal pay for men and women teachers, formerly a very controversial topic, has now been granted, and the National Union of Women Teachers has consequently decided to disband itself.

Among other bodies, a place of honour must be accorded to the College of Preceptors, the oldest existing association of English teachers. It was founded in 1846, with the object of protecting the interests of private schools and schoolmasters, as distinguished from the public and the endowed grammar schools. Later (1883), the Private Schools Association

was formed to protect the interests of efficient private schools.

It is convenient to mention here the Headmasters' Conference (founded in 1870), although its object is not mainly to protect professional interests, but rather to discuss educational questions which affect schools in close connection with the universities of Oxford and Cambridge, i.e. the public schools, of which no precise definition can be given. The rise and progress of the girls' high schools led to the formation, in 1874, of the Headmistresses' Association, the need being felt for the discussion of educational questions similar to those of the Headmasters' Conference. Ten years later, the Association of Assistant Mistresses was formed, to protect the interests of assistant mistresses, and to discuss from their point of view the problems of the still growing girls' high schools. It was not until 1890 that the masters in secondary schools other than public schools began to organize themselves. In that year, the Association of Headmasters was formed, and was followed a year later by the Assistant Masters' Association. In 1892, there was formed the Association of Headmasters of Preparatory Schools, having a natural affinity to the Headmasters' Conference.

(b) *For general study of educational problems* The organizations which exist in England for the disinterested study of educational problems are not strictly professional in character. Though their membership consists largely of teachers, they are open to other persons, and they have nothing to do with professional interests. England has never had an organization comparable with the great National Education Association of America, partly, no doubt because of the deeper social cleavages of an older nation. The leaders of reform in the education of young children led the way when in 1874 they established the Froebel Society. In 1883, there followed the Teachers' Guild, later known as the

Education Guild, the object of which was to promote co-operation and to facilitate interchange of opinion among all persons interested in the study and practice of education. In its day it fulfilled a useful function. More recent movements for the study of educational questions are represented by the formation of an Educational Science Section of the British Association for the advancement of Science, the Conference on New Ideals in Education, and, most important in the sense that it is international in its outlook, The New Education Fellowship, with its interesting organ, *The New Era*.

(c) *For specific improvement in teaching* One of the most striking developments in recent years has been the formation of associations of teachers of special subjects, having for their aim, not so much the advancement of the subject itself, but improved methods of teaching it. A Royal Geographical Society, for example, has existed since 1830, but it was only incidentally interested in the educational aspects of geography. Now we have a Geographical Association which is mainly interested in geography as an instrument of education. Similarly, there was a Royal Historical Society, the object of which was, and is, to encourage historical research; but there is also now a Historical Association whose object is to secure the proper recognition of history in education. Again, the London Mathematical Society has existed for the encouragement of mathematical research, but we now have the Mathematical Association, which is essentially an association of teachers of mathematics. Similarly, we have a Modern Language Association, an English Association, a Science Masters' Association, and an Association of Women Science Teachers—the last two quite distinct from the various scientific societies. There are also associations for promoting art education.

These "subject associations," as they are sometimes called, are among the most significant developments in the recent

study of educational questions. They seem to indicate two great changes. They indicate that, after many years spent in battling for the teacher's professional interests, and in securing the means by which a teaching profession may be established, teachers have settled down to a study of the real problems of education itself, which are other than those of educational politics. They indicate also a distrust of any one method of teaching things in general, including any educational psychology which professes to supply such a method. They stand for the newer conception that each of the great branches of human culture has its own history and its own traditions, apart from which any study of method must savour of formalism and inutility.

The ideal of a united teaching profession The associations of English teachers which have thus gradually come into existence have their parallels, though not their precise equivalents, in other civilized and democratic countries, and the organization of the teaching profession in different countries would form an interesting study in comparative education. All the way through this development in England there has existed a desire on the part of teachers, not only to unite sectionally, but also to form a single profession on the basis of a comprehensive scheme of registration. For a period of sixty years, attempts were made to establish a register of duly qualified teachers, and during that period no fewer than twelve bills were introduced in the House of Commons. But it was not until 1907, after one futile register had been made and unmade, that an Act of Parliament conferred on teachers the means of making teaching a recognized profession. Yet, although the principle was thus established, great difficulties of detail remained. The Act provided that the register should be formed and kept by a Council consisting of members "representative of the teaching profession." The trouble was that at the time there was no teaching profession

properly so called, but only a number of inharmonious sections. It was not until 1912 that a scheme was formed, not very logical or satisfactory, but still a working scheme, and the next year the conditions of registration were published and the register was started. It did not, however, command the support necessary for success and it has now been discontinued.

There is little doubt that the progressive ease with which different sections of the teaching profession have worked together harmoniously is partly due to the fact that, since the Education Act of 1902 began to take effect, all teachers alike have attended the secondary or public schools. But it cannot yet be said that all teachers appreciate the advantages that must, in the long run, accrue from the solidarity which characterizes a true profession. The achievement of such solidarity may perhaps be helped by the new arrangements under which status and basic salary do not depend on the kind of school—elementary or secondary—in which a teacher works; there is now one basic salary scale for all teachers in maintained schools—primary schools and secondary schools of all types. However that may be, there is a new stirring of interest in professional solidarity. For example, the National Union of Teachers propose this year (1960) to approach at least eight other teacher organizations with a view to forming a new comprehensive association of teachers.

REFERENCES

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J. Adams's *The Teacher's Many Parts* is in its author's lightest vein, but is a comprehensive review of the teacher's position at the time of publication.

THE CONTROL OF SCHOOLS

The system and the individual A STORY is told of a headmaster of a large elementary school who, during a preliminary talk with a new member of his staff, a young man fresh from college, illustrated his remarks by drawing on a piece of paper three concentric circles, with a dot at the centre. "*That*," said the headmaster (indicating the outer and largest circle) "is the Board of Education; *that* (indicating the intermediate circle) is the County Council; *that* (indicating the inner circle) is *me*; and *that* (indicating the minute dot) is *you*; and don't you forget it." Now there is a very obvious sense in which the headmaster was quite right on the point of fact though he might have expressed himself more civilly. He was thinking of the educational system as a vast organization, and the very term "organization" implies, among other things, some of the attributes of a machine, in which there are a few big wheels and many little ones. In that sense, the individual teacher, especially if he be very young, might say with one of old in his contemplation of the universe, "Behold I am of small account." But there is a deeper sense in which the headmaster was hopelessly, and even perniciously, wrong. His diagram represented the machine well enough, but it ignored the person for whom the machine exists. It was a clear case of the play of *Hamlet* with the part of the prince left out. From the child's point of view, the big circle would certainly have represented the person with whom he spends hour after hour, day after day, week after week—his teacher. And this is a case in which we had better let the little child lead us. For the fundamental fact in education is the relationship—a spiritual relationship—between a man or woman and a group of boys or girls.

The whole official organization, from the Minister of Education downwards, is in the deepest sense subordinate and ancillary to this fundamental situation. In an external and economic sense, the individual teacher is a servant, and maybe a very humble servant, of the public. But unless he can be at the same time captain of his own soul, he will not be a good teacher. It may be well, therefore, to take stock of the vast organization to which officials, teachers, and pupils all belong.

Then and now Let us take two convenient points of time a century apart, say the years 1825 and 1925, and let us make a rapid comparison of the schools of England at the beginning and end of the period. In 1825 there were many dame schools for the children of the poor, and National and British schools were coming into being slowly and on a purely voluntary basis; in 1925 there were 20,000 elementary schools attended by about five million children. At the earlier date, what we know as secondary education was represented, as we have already seen, by the nine "great" public schools, and a large number of endowed grammar schools for boys only, most of which had fallen into a shocking state of decay; at the later date, there were 1,700 efficient secondary schools attended by 415,000 pupils, of whom more than half were girls. At the later date, there were also about 150 technical schools, 200 schools of art, 100 training colleges, and 500 university tutorial classes—all of which categories were practically unrepresented at the earlier date. In 1825 university education was represented by Oxford and Cambridge in their unreformed condition, and attended by students counted in hundreds; in 1925 the number of universities had grown to about a dozen, attended by students counted in thousands. There is some difference of opinion as to the meaning of progress, and it is more than ever believed that the leading thinkers of the nineteenth century assumed much too lightly that human

progress inevitably takes place with the mere passage of time. But there can be no doubt whatever that within the period we have mentioned educational progress in the quantitative sense took place on a very large scale.

State intervention In the eyes of the historian a century is not a long period of time, but it was long enough to change the face of England in more senses than one, and notably in the educational sense. The explanation of the colossal expansion summarized above may be given in two words—state intervention. A large proportion of the institutions we have mentioned were called into existence by the state, and even those which were not so initiated are, with comparatively few exceptions, subsidized by the state, or at any rate inspected by state officials. The ubiquity of the state in all that concerns education is one of the portents of our time, and calls for remark in any comprehensive treatment of educational principles. Everyone knows vaguely what is meant by the state, and there is no need here to make a lengthy excursus into political science. We may content ourselves with noting that “in a civilized country the force of the community is vested in certain persons for the purpose of defence and government, and when the community acts by means of these persons it is called the state, and the members of the community are called subjects of the state.” The names of the great departments of the state—Admiralty, War Office, Home Office, Ministry of Health, Ministry of Education, etc.—are household words. Each has its hierarchy of permanent officials, headed by a secretary. The parliamentary head, the Minister of State, comes and goes with the rise and fall of political parties in the struggle for place and power. The cynic would say that he is usually chosen because he knows nothing about the special business of his department, though some distinguished exceptions would have to be admitted. As a rule, his strong assets are vision, personality, and a quick intelli-

gence. But many a good story has been told about the practical supremacy of the permanent officials.

Central and local authorities Obviously, a complete national system of schools cannot be administered from a central office, and so besides the central authority, local authorities are set up. The degree of power reserved to the central authority varies in different countries, because it depends upon the general tradition of government in each country. Of all the great civilized countries, pre-war France presented the clearest instance of a strong central authority whose power was everywhere manifest. In America there is no central authority, although the federal department of Washington assumed functions during the second world war which makes it more than a bureau of information. If, therefore, we want to compare England with the United States, we can do so only by taking each of the forty-eight states separately. The United Kingdom is in a position all its own, for Scotland, Northern Ireland and Wales each has its own central authority for education, though no two of them stand in the same relation to the British Parliament.

What we have called the central authority may therefore be for the whole country, or for one of the states of which the country consists, or for a historical and political entity which is not a separate state, as in England, Scotland, Wales and Northern Ireland. The extent and functions of the local authorities, and their relation, where they exist, to the central authority, vary greatly, not only in different countries, but also in the several states of the same country. In England there were no local authorities until 1870, when the School Boards were established. The Local Government Act of 1888 paved the way for the great reorganization effected by the Act of 1902, when the new local authorities were made responsible for education in their areas—with modifications in detail which need not here detain us. The responsibilities of the English

local authorities were so great as to attract persons of weight and influence to serve their country voluntarily in the cause of public education, and also to attract some of the ablest men and women as officials. If, however, many of the old school-board areas were too small, the complaint commonly made about the new educational areas was that some of them were too large, so that "the behaviour of a bureaucracy in a provincial capital of an extensive county area is almost as detached from the will of the humblest sort of citizen as are the edicts of a secretary at Whitehall." It is to be noted, however, that in some areas a considerable amount of devolution of power to district committees is practised. The areas of the English local authorities were so large that an immense amount of detail, much of it very important, was practically removed from popular control, which was not so much the case under the old school boards. But when an issue was a grave one, affecting the daily lives of the masses of the people, popular control might at any time make itself felt at the elections. It was for that reason that the provision for continuation schools made in the Act of 1918 was never carried into effect. The whole situation has been transformed by the Education Act, 1944.

The position of the parent The state, acting through the central and the local education authorities, wields an immense influence over the children of the country, and an increasing influence over the adolescents. This assumption of power and influence on the part of the state has not come without a struggle, because historically there have been other claimants for the care of the rising generation. First, there is the obvious claim of the family, about which something was said in an earlier chapter. We saw that in a primitive state of society, the child's education is conducted entirely in the home. The boy learns from his father the arts of hunting, fishing, and building after a rude fashion; and the girl learns from her mother the arts of cooking, weaving, and so on. Such are the

conditions among the Esquimaux to this day; and among some North American Indians it is a grievance to have to send a child to school.¹ But as civilization advances, and society becomes more complex, and more highly organized, home education becomes less and less adequate, until, under some modern conditions, it practically disappears. Hence the necessity of schools.

The vocation as an education; apprenticeship And with this advance in civilization came another change. The rude efforts of primitive men, each working for himself in the home, developed into skilled crafts—the craft of the mason, the weaver, the carpenter, the tailor, and the boot-maker. Even the skilled craft was in early times practised as a normal part of family life. But in the Middle Ages there arose the system of apprenticeship, which not only bound a boy to serve his master faithfully, but also bound the master to bring up the boy as well as to train him in the craft. The boy had a place in the home as well as in the workshop of his master.² The apprenticeship system flourished until the eighteenth century, when it began to fall into decay. The industrial revolution, with its immense expansion of mechanical power, was fatal to the old handicrafts, and the problems of child labour which resulted from the change were very different from those which existed before.³ While it lasted, apprenticeship was often an efficient education in its way. For the old craftsman was “wise in his work,” and “all his desire was in the work of his craft.” The same kind of remark could hardly be made about a modern factory hand.

¹ In O. La Farge's novel, *Laughing Boy* says to Slim Girl: “The Americans do good things, and then they do something like taking a child away to school for five years. . . . Soon we shall be where there are very few Americans, and we shall see that our children never go to school.”

² See Findlay, *The Children of England*, p. 42. ³ *ibid.*, p. 98.

The church as educator But apprenticeship, though it might provide well for that practical education which is even now only slowly winning its way into a recognized position in a child's training, had little to do with that book-learning with which we still tend to identify education—the kind of learning for which the schools have always provided. In regard to book-learning, “the church is the mother of mediaeval and so of modern education throughout the western world. Though in later times she was rather an unjust step-mother than a nursing mother, yet for 950 years, from 600 to 1550 A.D., the church was the sole provider and protector of education.”¹ With the Reformation, and its ideas of “an open Bible” and the conduct of public worship in the mother-tongue, came a great change in the conception of popular education. The ability to read was, in the eyes of the reformers, a manifest necessity. In Germany, the home of the reformers, the change began at once. In France it did not begin until the Revolution. In Scotland, the national organization of education began with John Knox, who did for Scotland what Luther did for Germany. The immediate effect of the Reformation in England, as we all know, was entirely different. The suppression of the old religious foundations caused education to decay when in other countries it thrived. But though schools existed only for the few, yet many people who never had the chance of going to school still managed somehow to learn to read their Bibles. And in the efforts to establish charity schools in the eighteenth century, and National and British schools in the nineteenth, the prime aim was to enable children to read the Bible.

State responsibility Thus we see that for reasons that lie in her history England was not to the fore in the spread and the organization of education on a national

¹ A. F. Leach, Art. “Church Schools” in Monroe's *Cyclopaedia of Education*.

scale. But in the course of the nineteenth century, and as a result of the continental convulsions of the eighteenth, a new motive appears with the gradual extension of political power. If people were to vote, they must at least learn to read the newspaper, whether or not they continued to read the Bible. So we see the significance of the facts that the first Reform Act of 1832 was followed by the first parliamentary grant for education in 1833; that the second Reform Act of 1867, in connection with which Robert Lowe uttered his famous gibe about educating our future masters, was followed by the Education Act of 1870; that the great reform of local government in 1888 was followed by the Education Act of 1902, which made education in all its branches a really national concern; and that even before the close of the first great war, and the universal suffrage which followed inevitably, the Education Act of 1918 recognized education as an essential part of national reorganization. In all these astounding developments the responsibility of the state for the education of the people increased by leaps and bounds.

Church and State But this assumption of responsibility by the state has not come about without a certain amount of conflict with the other claimants we have mentioned for influence over the rising generation. We have seen how the church was originally the sole provider of education, in its usual sense of book-learning. A visitor from a comparatively new country, such as the United States, might, if he were not acquainted with our national history, marvel at the "religious difficulty" in our schools, and generally at the powerful influence of the churches, and especially of the national church, in our educational affairs. The reason of course is that our history stretches back far beyond the voyage of the *Mayflower*, back to the Middle Ages and beyond, back to a time when, if the church had not cared for the education of the child, then no one, except some of the parents, would

have cared. This responsibility of the church, which always existed in theory, came to be slackly borne, so that, especially in the eighteenth century, the church neither did its duty nor allowed other people to do it. When at length other people insisted upon taking the matter in hand, it was maintained in responsible quarters that, although the clergy had admittedly misused their opportunities, yet the education of the people should continue to be the duty of the church, that the clergyman and not the teacher is the real bond between the classes and the real "head schoolmaster of the parish," and that "the principle of state education can never be applicable to any age."¹ The prophetic element in this statement was obviously a bad shot. Even if theological differences had not prevented the church, or the combined churches, from being responsible for the education of the nation, the stupendous magnitude of the problem would have prevented it. The first law which compelled people to send their children to school also made the state responsible for the required provision of schools.

But in spite of the visible encroachments of the state, the historical defenders of church responsibility have by no means yielded up their case, and if certain premises be granted, their case is, as might have been expected, a perfectly logical one. It is therefore a case which every intelligent citizen, and above all every teacher at work in the schools, should take the trouble to understand. Before the general election of 1929, the Catholic archbishops and bishops of England and Wales wished to make their position quite clear to the electorate, and they therefore drew up a statement of the principles which they held. That statement set forth that (i) it was no part of the normal function of the state to teach, (ii) the state was entitled to see that citizens received due education sufficient to enable them to discharge the duties of citizenship in its various degrees, (iii) the teacher was always acting *in loco parentis*, never *in loco civitatis*, though the state, to safeguard its citizenship, might

¹ F. Denison Maurice, *Lectures on National Education* (1833).

take reasonable care to see that teachers were efficient. The position of the thoroughgoing advocate of church responsibility is more fully indicated by the Pope's encyclical issued 11th January 1930. According to this document "man springs from three kinds of society. Two of these, the family and the state, are of a natural order. The third, the church, is of a supernatural order. The family, being instituted immediately by God, has a priority of rights over the state, but lacks some means for attaining perfection. On the other hand, the church is a perfect society, and is independent of any earthly power both in the origin and exercise of its educative mission. Further, the church has an unalienable right and duty to supervise the entire education of its sons, in whatever institutions, whether public or private, and whatever the subject taught, in so far as it concerns religion and morals. This supremacy of the church can fit in perfectly with the rights of the family and of the state, and also with the rights of individuals, as regards the just liberty of conscience. The function of the state is to protect and promote, not to absorb or take the place of, the family and the individual. In the sphere of education it is the state's right, and even duty, to protect the anterior rights of the family and the church. Similarly, the state ought to make good any deficiency due to the incapacity, unworthiness, or other defects of parents, and generally to protect, according to the rules of reason and the faith, the moral and religious education of the young by removing any public impediment. The state can rightfully demand and ensure that the citizens have a proper knowledge of their civil and national duties, and attain a certain standard of intellectual and moral culture. Nevertheless, the "native rights" of the church and family must be respected. Consequently, every educative or scholastic monopoly, which physically or morally compels families to frequent the schools of the state against the dictates of the Christian conscience or against their own legitimate preferences, is unjust. The state may reserve to itself the direction

of schools specifically preparatory to certain public offices and to the armed forces, but always in such a way as not to injure the rights of the church and family."¹

To argue the claims of the state and the church, as they dispute over the body and soul of the child, is no part of the purpose of this book. It is enough for us to make the facts as clear as possible—the facts which cause the fundamental “religious difficulty.” On the one hand it is contended that “it is no part of the normal functions of the state to teach.” At the other extreme it is held, as for example in Soviet Russia, that only the state has the right to educate. But between these extremes lies a vast body of moderate opinion in England, which holds, as Macaulay put it in the House of Commons as long ago as 1847, that “whoever has a right to hang has a right to educate.” He added that “such a hell on earth as Norfolk Island need never have existed, if we had expended in training honest men but a small part of what we have spent in hunting and torturing rogues.” The educational efforts of the state since 1847 have, it may reasonably be pointed out, proved Macaulay to have been a true prophet. But, of course, the extreme advocates of church responsibility might still hold that the state ought to have assisted the churches instead of partly supplanting them.

The parent and the state The right of the state to intervene on behalf of the child has thus been questioned in one sense by the church, and it has been questioned in another sense by the parent. The old notion of the right of the parent to bring up his child as he thought fit lasted on as late as 1861, when a Royal Commission decided not to recommend compulsory education, chiefly on the ground that children’s wages were so useful to parents. The commissioners pointed out that in agriculture a child of eight could earn sixpence a day, and a child of twelve could earn a shilling.

¹ As reported in *The Times*, 13th Jan. 1930.

They said that the value of children's labour in factories was matter of universal information, and that the nature of a collier's employment was such that it can hardly be performed at all unless the children are accustomed to it from a very early age.¹ They had the precedents of Prussia and France and Switzerland before them, but they argued in effect for the Englishman's sacred right to do as he pleased with his own children, so long as he did not murder them. Nine years later the tentative principle of "permissive compulsion" was introduced into Mr. Forster's measure, and from that point onwards the state, without waiting for a strong pressure of public opinion, continued to assert its rights over the preparation of its future citizens. Not, however, without much stolid opposition. Most of the parents in the latter part of last century were unschooled people, who did not understand their children's true interests, and had really to be compelled. Unfortunately, the state had no alternative but to say—"whether you agree or not, you must send your child to school, on pain of fine or even imprisonment." The natural consequence was a mass of half-articulate parental feeling against the interference of the state. It followed also that, as the teacher is for practical purposes an agent of the state, trouble arose between parents and teachers about such matters as regular attendance, home lessons, detention and punishment. The threat "I'll tell my father" was not infrequent in the elementary school of the past, and occasionally the antagonism between parent and teacher assumed the character of a physical contest. Such a scene was symbolic of the strained relations between the parent and the state. In schools above the elementary grade, the mischief was not so acute, but it was not entirely absent.

¹ The Durham and Bristol colliers were, however, in favour of a measure of compulsion.

Parents and teachers In our time, all this has changed. Practically all the parents have themselves been to school, most of them have been happy there, and all except a negligible few value what the schools are doing, especially for the younger children. Even now, however, in all parts of our educational system, the teacher as an agent of the state, or at least as a member of a profession, tends to regard the parent merely as the provider of educable material, and almost as a necessary evil—necessary because without parents there could be no children to educate, and, therefore, no work for teachers, but still a trial to be borne as patiently as may be. Of course it could not be right that a child's life should fall into two dissonant parts, and that he should own alternate allegiance to two parties between whom misunderstanding and even hostility might exist. Here was one of the educational problems of the time. In what directions was a solution to be looked for? The Board of Education set a good example when, in the now famous Introduction to the Code of 1904, it exhorted teachers to remember their relation to the parents who entrust their children to the schools. This seems to be the first time that the central authority for education in England made reference to the parent as other than an obstacle to the designs of the state. Since then, much has been done by teachers to invite the interest and co-operation of parents, by means of open days and parents' evenings, besides the time-honoured prize-givings, when pupils and teachers and parents and friends foregather. Again, the Act of 1918 ranked parents among "other persons interested in education" as being entitled to express an opinion upon the scheme which each local authority was required to propose. Perhaps not much came of this provision, but, at any rate, the parent as such was recognized by Act of Parliament.

Parent-Teacher associations in America Upon the whole question of the relations between parents and teachers, England would do well to give heed to what is happening in the United States, where membership of the National Congress of Parents and Teachers rose from about 30,000 in 1910 to more than a million in 1927, covering 47 out of the 48 states. The chief results claimed for parent-teacher associations are that they facilitate acquaintance among the persons jointly responsible for the child's upbringing, that they help parents to realize that what is good training in school is also good training out of school.¹ American opinion is not unanimous about parent-teacher associations, and it is realized that "the ever-present danger is that of diffuseness in activities." But a movement that has grown so rapidly and has become so popular does, in all probability, meet a real need.

The state and the occupation It was not possible to describe the conflict between the state and the parent without some reference to the parallel conflict between the state and the various occupations open to children. Right through the nineteenth century the latter struggle continued, it being maintained that certain industries, such as the agricultural and textile, must languish and perish if child labour were not available. It was for this reason that attendance at school was so loosely exacted in the country districts under the old school boards, and it was for this reason also that the half-time system persisted in Lancashire until the close of the first great war, when many another time-honoured fallacy was thrown to the winds. We have already observed that an occupation at its best, such an occupation as that of a skilled artisan, may afford a good education of its kind to the young learner, and that this was especially true of the old apprenticeship. Now the sort of education aided or provided by the state

¹ See J. E. Butterworth *The Parent-Teacher Association and its Work* (New York 1928)

made little or no use of manual activities, but was entirely a matter of paper and print. Each kind of education was, taken by itself, too narrow, and we began to realize the need of a broader conception which should embrace the essentials of both kinds. The extension of practical work in the elementary stages of education, and the rise of junior technical schools, in which general education was not neglected, were examples of the efforts of the state to combine in a harmonious whole the child's natural propensity to do as well as to know. The old conflict between the state and the occupation in regard to the child largely gave place to a more or less cordial understanding.¹

Inspection We have described the gradual extension of state intervention and control, and the gradual easing of the relations between the state and the parent, between the state and industry, and to some extent between the state and the churches. All this could not have been brought about without an effective personal link between the state department of education and the other parties concerned. That personal link has been supplied by the corps of officials known in this country as school inspectors. It does not fall within the scope of this book to trace the history of the English inspectorate, from its beginnings in 1840 to the present time, nor to describe the various divisions and grades of the inspectorate, nor to make any more than a passing reference to the distinction between "Her Majesty's" inspectors and the inspectors employed by some of the local education authorities, who often have administrative rather than inspectorial duties. It is with the principle of inspection and the true place of inspection in the educational system that we are here concerned.

¹ For the philosophical justification of this change, we must look to the writings of the educational pragmatists, and notably to those of John Dewey.

As inspection was originally conceived by Dr. Kay,¹ the first secretary of the old Education Department, and as it was carried out during the years between 1840 and 1862, it appears to have been very successful. It enabled a shrewd man, though he may never have taught children himself, to form a judgment as to the tone of the school, the efficiency of the teacher, and the quality of the work done. He could also afford to be the friendly adviser of managers and teachers. But with the coming of payment by results all this was changed. Very able and well-paid men were sent round the country to find out whether little boys and girls could get three sums right out of four, and whether they could write ten dictated lines with no more than three mistakes in spelling.² Inspectors' assistants, selected from the ranks of the elementary school teachers, did the most soul-destroying part of the routine work, but even so there was quite enough left for "H.M.I." The real needs of the time were regular schooling and better teachers. But the powers that were preferred the thumbscrew of payment by results, and the inspectors had to apply it, during the period from 1862 to 1895.³

With the passing of the annual examination and payment by results, and the spread of a system of state-aided secondary education, the inspection of English schools entered upon a new and a finer phase. The inspector (whom the urchins of the 1880's called, with unconscious humour, the "spectre") may now be, and often is, a guide, philosopher, and friend. He may be a critic in the true sense, cordially appreciating what is

¹ Afterwards Sir James P. Kay-Shuttleworth.

² For Robert Lowe the tone of a school was "an inpalpable essence" which could not be measured and paid for and which the inspector might therefore ignore.

³ The reader is warned against accepting such a complacent view of the old annual examination as that taken in an otherwise excellent account of the inspectorate which appeared in the Board of Education's Annual Report, 1922-23. Anyone who lived through part of the period, whether as a child or as a teacher or as both, in an elementary school, is constrained to regard payment by results as a classical instance of the worst that the "official mind" is capable of.

good, and tactfully indicating what is otherwise. He must, if he be honest, be hard upon laziness, but he may now, without failing in his duty, look with a kindly eye upon the well-meaning blunderer. He may—and this is one of the most valuable of his functions—act as a carrier of information about improved methods, for he sees scores of schools, whereas the teacher sees only his own. He may even officially sympathize with the view that no child should be robbed of his happiness, in order to be able to spell words that he will never use, and perform calculations that he will never need. It is said that most people bear upon themselves the marks left by the practice of their profession; and an inspector is apt to bear upon himself (or nowadays herself) the marks left by the practice of continually criticizing other people's work, without ever trying to do that work. And it is, therefore, to be doubted whether the inspection of schools, as distinguished from educational administration, is a hopeful career for any young man or woman to embark upon for a working lifetime.

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The matters discussed in this chapter may be further studied in Findlay, *The Children of England*, and *The Foundations of Education*, vol. I; L. A. Selby-Bigge, *The Board of Education*; G. Kekewich, *The Education Department and After*; H. Bompas Smith, *The Nation's Schools*; and *Report of Committee on Education and Industry* (H.M. Stationery Office); A. G. and E. H. Hughes, *Education: Some Fundamental Problems*, ch. xi.

For the history of the English inspectorate, see the report above referred to, also Matthew Arnold, *Reports on Elementary Schools*; and Sneyd-Kynnersley, *H.M.I.*

For a comparison between different countries as regards education, see N. A. Hans, *The Principles of Educational Policy*.

APPENDIX

THE PROJECT METHOD

THE "project method" is being made so much the subject of discussion and experiment, especially among teachers of young children, that it seems desirable to add some further remarks on the method, especially by way of warning. The fundamental principle of the method is that of *wholehearted purpose on the part of the pupil*. The precise opposite is the method in which the purpose is the teacher's, not the pupil's; the method of setting a task, and requiring the pupil to perform that task, possibly with penalties for failure to do so. Directly this is understood, the student of modern education sees that there is nothing fundamentally new in the method *as an idea*. But there is a new emphasis upon the underlying principle, and a new enthusiasm for carrying it into effect in schools in which experiment is encouraged. Though not new in idea, the method is new enough in practice. The old method is that of dull lesson-learning. The new method is that of purposeful activity. From this definition certain important consequences flow.

(1) There is no special connection between the project method and the teaching of young children. For example, at a certain men's evening institute, a general interest in "wireless" led to the focusing of that interest in a class, and a syllabus was so framed as to ensure that the men made a sound theoretical as well as practical study of the subject. On the assumption that the men took an active part in framing the syllabus, this was a pure example of the project method. If an ordinary school or college course of physics had been offered, even with a "wireless" bias, the class would probably have

melted away. Precisely the same line of remark applies to the methods often employed by the tutor in the adult education movement.¹ Perhaps academic teachers have something here to learn from the teachers of voluntary adult classes.

(2) As exemplified in schools for younger children, the project usually involves a social situation of some kind, such as a shop, a street, a post office, a farm; and it involves therefore a good deal of hand-work. But these attributes are not essential to the idea of a project. If, for example, the children have been constructing a post office, and if, on finding that illiteracy is a serious disadvantage in the management of such a concern, they become fired with an ambition to improve their reading, writing and spelling, then these so-called formal subjects acquire the essential attributes of a project. Any activity may become a project, if pursued with wholehearted purpose.

(3) We have said that dull lesson-learning, done at the teacher's behest, is the precise opposite of the ardently pursued activity that originates in the learner's own felt needs. But these are two extremes, and there may be several stages between. In other words, the spirit that animates a class of children at work upon a project as commonly understood, may in some degree be present in quite ordinary school work, even formal lessons in reading and writing. The best service which the project method can render to education is to suggest that wholehearted purpose on the part of the pupil should in the greatest possible degree infuse the most ordinary of school lessons. The worst service it can render is to generate the notion that a certain type of procedure, imitative of adult activities in real life, is likely to prove a panacea for all the ills of school life.

An illustration drawn from personal experience may help. The writer, at a certain stage of adolescence, became impressed by what seemed to him the ordered and even beautiful sim-

¹ See R. W. Rich in *Adult Education in Practice*, p. 131.

plicity of Euclid's geometry, and especially by Euclid's doctrine of proportion, as expounded by A. de Morgan. So impressed was he that he was willing to devote his spare time for some months to the mastery of the first six books of that now obsolete text-book, *Euclid's Elements*. He was not a child, he worked alone and not in a social situation, and, so far from hand-work being involved, the work could have been done if he had sat still with folded arms. But the one essential attribute of the project, wholehearted purpose, was present throughout. The self-appointed task was a bit of real life, of *his* real life, but it happened to be of the intellectual and not of the practical type.

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